Appendix 3E

CIPA Phase 1 report

Price Proposal 2020–24

COMMERCIAL IN CONFIDENCE

FINAL REPORT

Customer-informed IPART submission (CIPA) Phase 1

Prepared for
Sydney Water

30 April 2018

THE CENTRE FOR INTERNATIONAL ECONOMICS
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Background

Sydney Water is committed to improving its overall customer value proposition by putting customers at the heart of everything it does. Sydney Water has promised:

> …to make every one of our customers proud by giving them a voice in what we do, and playing our role in creating liveable communities.
>
> This means we will involve customers in the big decisions that impact them…[1]

Many of the big decisions impacting the prices and service levels experienced by customers are made in the context of the operating licence and price reviews undertaken by the Independent Pricing and Regulatory Tribunal (IPART). Sydney Water wants to involve customers in developing the business plans and proposals that it submits to these reviews and in developing other business strategies.

This report details the method and results from the first phase of Sydney Water's customer engagement plan for 2018. This phase of customer engagement involved a series of forums, discussion groups, interviews and surveys conducted during February and March 2018 with samples of customers that are representative of the population in Sydney Water's operating area (Sydney, Blue Mountains and the Illawarra) and proportionate to the materiality of the topics.

These engagement activities focused on gathering evidence of customer attitudes and preferences regarding:

- perceptions of Sydney Water;
- priority outcomes;
- measuring service performance;
- rebates;
- fees and discounts for payment channel usage; and
- customer representation.

The primary consideration when selecting these topics for Phase 1 engagement, ahead of other topics that matter to customers, such as tariff structure, was a desire to inform Sydney Water's mid-2018 submission to IPART as part of the review of Sydney Water's operating licence.

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1 Sydney Water 2016, Sydney Water Customer Toolkit, December, p. 5.

How we talked with customers

- **In total, we engaged with around 2 277 customers – 2 011 citizens and 266 small and medium businesses.**

The engagement employed a range of activities to ensure an inclusive and accessible approach and applied the most effective techniques to each topic and questioning area. The activities were:

- two pilot deliberative forums with Sydney Water staff at Parramatta and Potts Hill;
- six deliberative forums with between 70-91 citizens participating in each forum (472 citizens in total), held in:
  - Penrith;
  - Chatswood;
  - Wollongong;
  - Parramatta;
  - Bankstown; and
  - CBD;
- six group discussions with 7-8 people in each group (46 customers in total):
  - one Mandarin in-language group;
  - one Arabic in-language group;
  - two financially-vulnerable customer groups; and
  - two small-medium enterprises groups;
- An online survey, completed by:
  - 1508 citizens; and
  - 251 small-medium enterprises.

Participants were sampled from across Sydney Water's area of operations and represent a range of genders, ages, languages, tenure types (owners and renters), household types, family types, dwelling types, and employment status. Participating businesses represented a range of sizes and industries. Younger citizens and citizens speaking a language other than English at home (LOTE) were slightly under-represented in the survey sample and the survey results were reweighted accordingly. Similarly, the proportion of LOTE representation in the forums was slightly lower than that in the underlying populations. The inclusion of in-language groups was used to ensure further LOTE representation and this variable was also weighted during analysis of data from keypad polling at the forums.

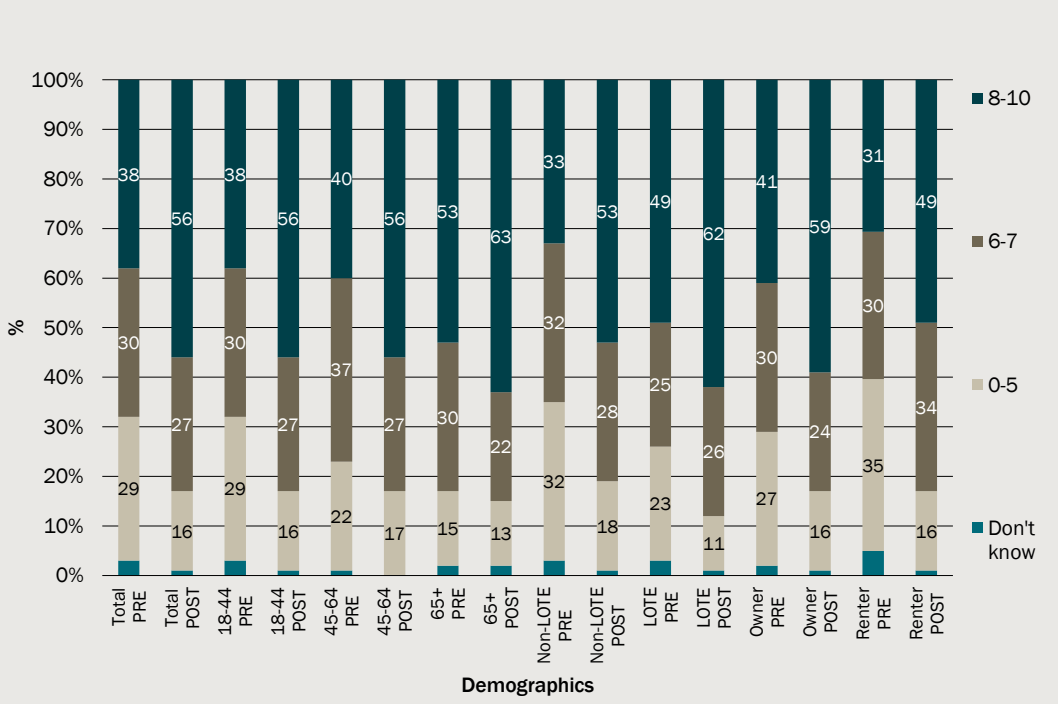
What customers told us

Perceptions of Sydney Water

The key findings in relation to perceptions of Sydney Water, drawn from the discussion and polling at deliberative forums and from responses to the online survey were as follows.

- The vast majority of survey respondents indicated they had heard of Sydney Water (93 per cent across the citizens and business surveys), although they were aware the survey was being conducted for Sydney Water prior to answering this question.
- When people think of Sydney Water, they think of drinking water supply. Wastewater came to mind for only one third of citizens surveyed (and they tended to use the word 'sewerage', rather than 'wastewater').
- Prior to forums, just over a third of participants stated that they were likely to speak positively about Sydney Water (score 8-10 out of 10).
- This percentage increased considerably to 56 per cent when asked at the end of forums.
- Younger participants at deliberative forums were the least likely to speak positively about Sydney Water (see figure 1).
- Older and LOTE customers were the most likely to speak positively about Sydney Water.

1 Likelihood to speak positively about Sydney Water to a friend or family member (pre and post forum)



How likely would you be to speak positively about Sydney Water to a friend or family member, where 0 is not at all likely and 10 is definitely likely?

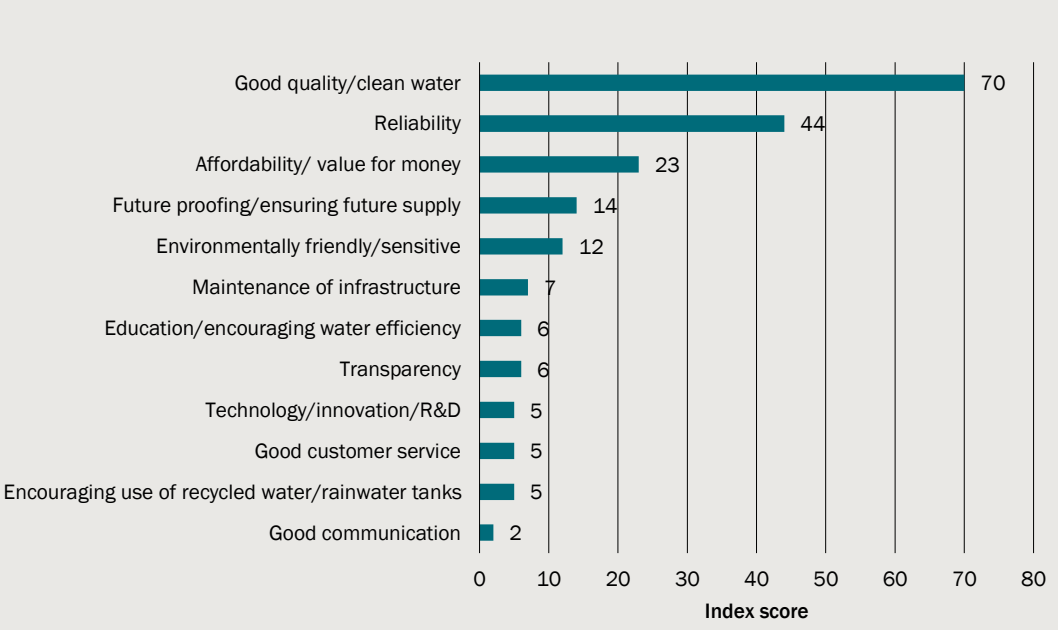
Base All respondents n=415; 18-44 (n=199), 45-64 (n=130), 65+ (n=86), Non-LOTE (n=344), LOTE (n=71), Owner (n=289), Renter (n=126)

- Forum participants generally thought Sydney Water provides reliable services.
- Few of the forum participants (16 per cent) rated Sydney Water as poor in terms of value for money, with many more (43 per cent) indicating Sydney Water represents good value for money.

Customer priorities

Customer priorities were elicited through a group exercise and keypad polling at the deliberative forums (see figure 2), a group exercise at the discussion groups, and unprompted and prompted questions in the online surveys (see figure 3).

2 Ideal supplier values: Ranking exercise from deliberative forums



Q. Please think back to the beginning of the forum and the values that you thought were important for a water and wastewater service provider to focus on in the future. And now please choose the top three values to you in order, i.e. choose the most important one first, then the second most important one, then the third.

The index score is generated by attributing three points to a value each time it is ranked first by a participant, two points to a value each time it is ranked second, and one point to a value each time it is ranked third. Scores are then indexed so that a score of 100 equates to a value being ranked first by all participants.

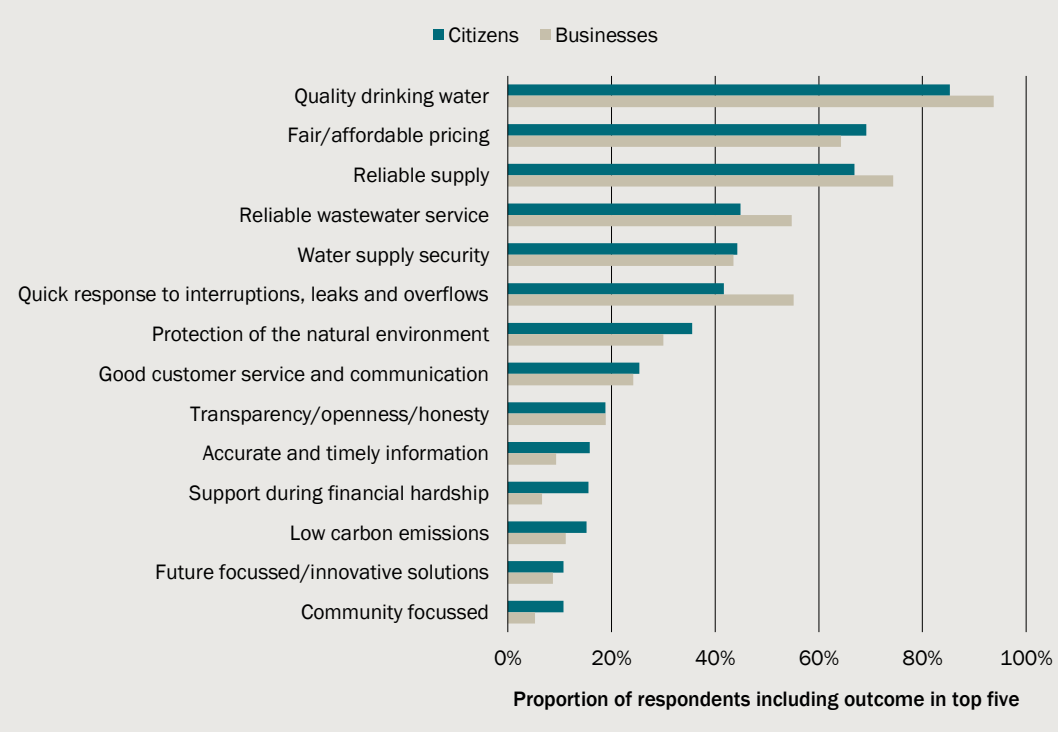
Base All participants (n= 467)

The key findings were:

- The outcomes that are most important to customers are:
  - clean/fresh/safe drinking water;
  - affordable/low prices; and
  - reliable supply (particularly important for business customers).
- Other outcomes that customers value highly include:
  - quick response to leaks, interruptions and overflows;
  - reliable wastewater service;
  - water supply security;
  - protection of the natural environment; and
  - good customer service and communication.
- Other priorities identified by smaller numbers of customers include education/water efficiency, transparency, technology/innovation, recycling/reuse and good water pressure.

- Discussion at forums and small groups indicated there are perceptions that Sydney Water is generally performing well with regards to quality of drinking water and reliability (minimal water interruptions).
- However, there is a perception that more could be done to repair leaks quickly and ensure water supply security, particularly because of the expected increase in demand by a growing population. Participants expected this would involve ensuring infrastructure is replaced or maintained, water being conserved or used efficiently, and that more recycled/grey water being used where it can be rather than drinking water.

3 Prompted customer priorities from online survey



Please indicate the five outcomes that are most important to you personally.

Base all respondents (n=1759), citizens (n=1508), businesses (n=251), citizen results reweighted for age and language

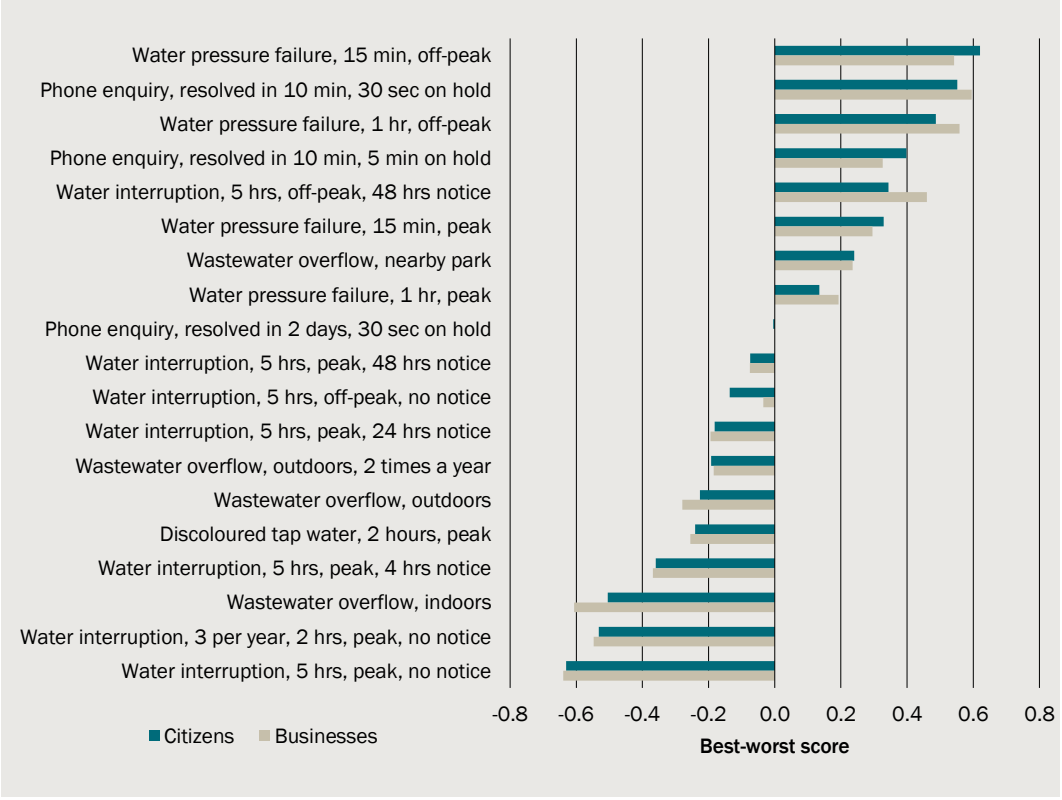
Measuring service performance

Views and preferences relating to measuring Sydney Water's service performance were gathered using discussion and keypad polling at deliberative forums, discussion at small groups, and a best-worst scaling exercise in the online surveys in which respondents were presented with six sets of three events and in each set asked to identify the most and least inconvenient events (see figure 4, where a more negative score indicates a more inconvenient event). The key findings were as follows.

- The inconvenience of water interruptions varies dramatically depending on time of day and the amount of notice given.
  - Water interruptions during the night with notice are one of the least inconvenient events.

  - Lengthy water interruptions during the day or evening without notice are one of the most inconvenient events (particularly for business customers) (see figure 4).
- Letter and SMS were the preferred methods of notification among forum and small group participants, with some customers identifying a letter (a week before) with an SMS reminder as the ideal arrangement.
- Survey respondents indicated they are highly averse to wastewater overflows, but water pressure failures and awaiting resolution of phone enquiries tend to be significantly less inconvenient than water interruption and wastewater overflow events.

4 Relative inconvenience of events



The Best-Worst Score is equal to (no. of times event chosen as best – no. of times event chosen as worst)/number of times event shown. A score of -1 indicates the event was chosen was worst every time it was shown. A score of 1 indicates the event was chosen as best every time it was shown.

Base All citizen respondents (n=1508)

- Forum participants indicated they would be 'much more unhappy' about repeat events, compared to one-off events, particularly in relation to wastewater overflows. However, survey participants did not indicate that repeat events would be more inconvenient than one-off events.
- Shorter response times are not always in customers' interests, with forum and small group participants preferring a deferred response in some circumstances so that the water supply interruption and associated noise take place at a more convenient time of day.

- For citizens participating in forums and small groups, the most convenient time for a water interruption is generally between 9am and 3pm. Preferences vary with respect to the least convenient time, but it is generally before 9am or after 6pm.
- For businesses participating in small groups, the most convenient time for a water interruption is typically late at night, while the least convenient time varies depending on their hours of operation.
- Communication during a water interruption is more important than restoring supply quickly, with most forum and small group participants preferring a four-hour interruption with communication to a two-hour interruption without communication.

The preferences of citizens paying bills directly to Sydney Water (predominantly home owners) were similar to those of other citizens (predominantly renters). However, there were some minor differences across this and other topics, as outlined in box 5.

5 Bill payers have similar perceptions and preferences to other citizens

When comparing the preferences of bill payers/home owners with other citizens, we find their perceptions as measured through keypad polling at the deliberative forums were similar in relation to Sydney Water having customer interests at heart and in relation to reliability. There were minor differences on other perceptions of Sydney Water, with home owners/bill payers:

- being more likely to speak positively about Sydney Water;
- giving a higher rating for Sydney Water's openness and honesty; and
- being more likely to give Sydney Water a rating of quite poor or very poor in relation to value for money (though it was still only 18 per cent of home owners giving one of these ratings).

Priority outcomes/values were also similar across the two groups, though bill payers placed greater emphasis on fair/affordable pricing and other customers placed greater emphasis on environmental outcomes.

The preferences of the two groups are similar in relation to a preference for communication over supply restoration, the relative inconvenience of events and relative rebate levels. In relation to other aspects of service performance and rebates, we found home owners/bill payers:

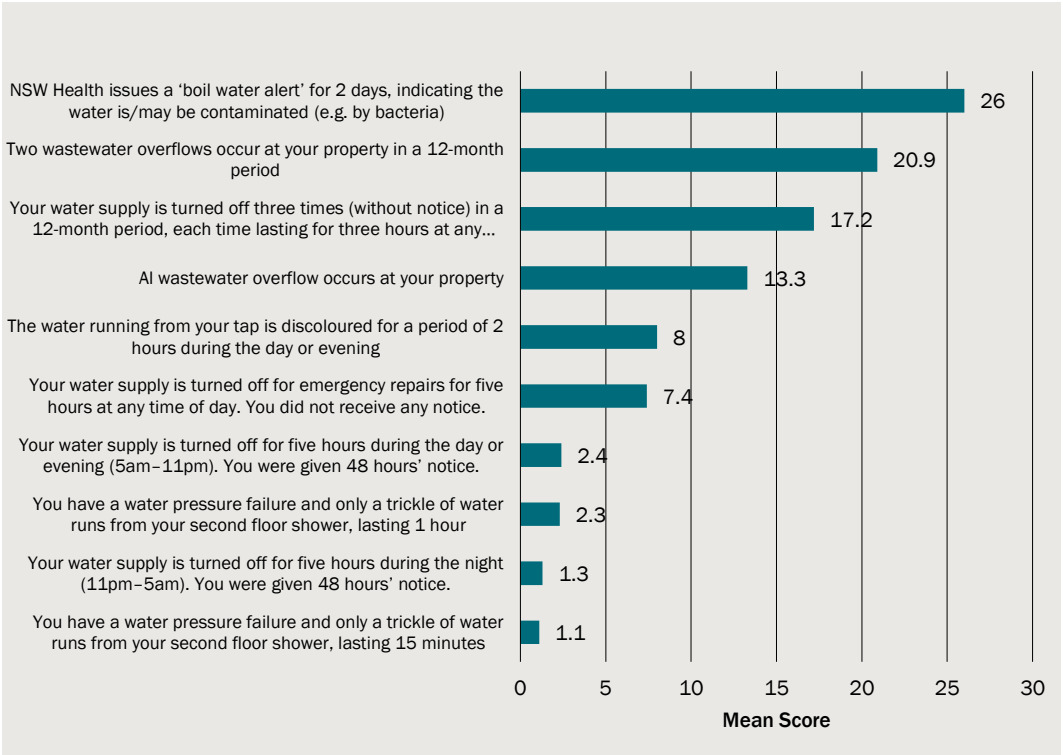
- were more likely to want broken water pipes to be fixed as quickly as possible, rather than waiting until 9-10am for the necessary three-hour water interruption;
- were more likely to be 'much more unhappy' about repeat events relative to one-off events (though both groups are clearly more unhappy about repeat events);
- were less likely to prefer email and app notifications for communication of notice (though letter and SMS were the two most favoured methods for both groups); and
- were less likely to indicate that it is important to find ways of providing rebates to renters (though six in ten still indicated this was quite or very important).

Rebates

Views and preferences relating to rebates were gathered using discussion and a budget allocation exercise at the deliberative forums and small groups. The key findings were as follows:

- The vast majority of customers were unaware that Sydney Water applies rebates for particular service failures.
- Customers favour and expect the continuation of rebates.
- Businesses expect their rebates to be higher than rebates to citizens due to potential loss of business, though it should be noted that the role of private business interruption insurance was not discussed.
- Customers generally prefer rebates to be paid automatically rather than on application.
- Around two thirds of customers think Sydney Water should try to find ways of directing rebates to occupants rather than property owners.
- On average, customers think the highest rebates should be paid for wastewater overflows, 'boil water' alerts, and multiple water interruptions without notice (businesses in particular) (see figure 6).
- On average, customers think little or no rebate should be paid for water pressure failures or water interruptions where notice is given.

6 Rebate budget allocation exercise



Each table will be given 100 tokens. As a group, please allocate the 100 tokens to the 10 events according to the level of rebate each event should attract.

Base All respondents excluding Penrith n=379; 18-44 (n=181), 45-64 (n=110), 65+ (n=88), Non-LOTE (n=306), LOTE (n=73), Owner (n=270), Renter (n=109)

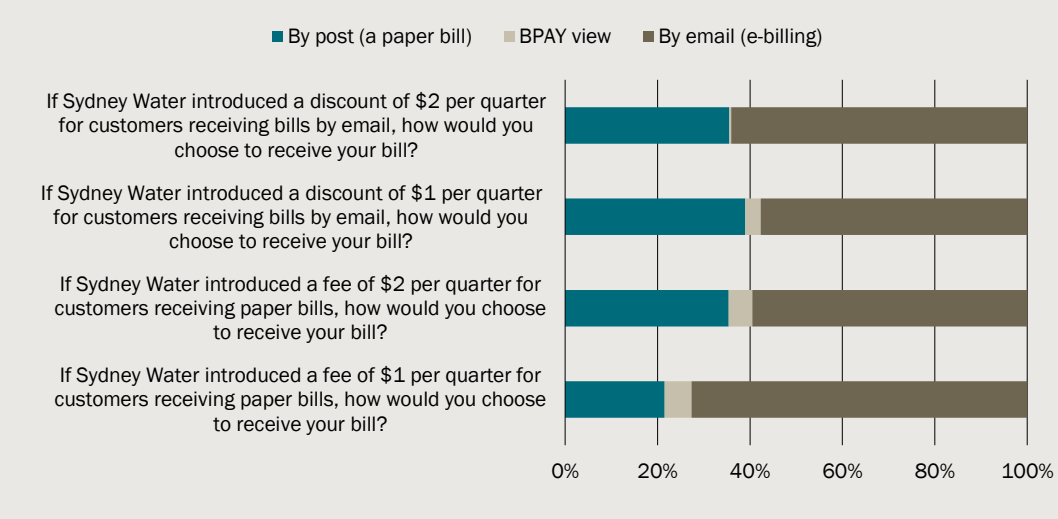
A notable difference between the survey results on relative inconvenience and the forum results on rebate levels was that the rebate budget allocation placed just 7.4 per cent of the budget on average against a peak water interruption without notice, which was found in the best-worst scaling to be possibly the most inconvenient event of those considered. This may be because the wording "emergency repairs" was used in the rebate allocation, but not in the survey. Past research has found customers are more forgiving of emergency interruptions as distinct from other interruptions without notice.[2] As a result, customers may not expect a large rebate for an emergency event, even if it is very inconvenient.

Discounts and fees for channel usage

Customers' views on and likelihood of switching in response to various fees and charges for bill delivery and bill payment methods were elicited using the online surveys. The key findings are as follows.

- Around half of customers currently receiving bills by post did not have an explicit preference for that method.
- More than half of these customers would switch to email bills if a fee or discount was introduced (figure 7).

7 Citizen customer bill delivery switching

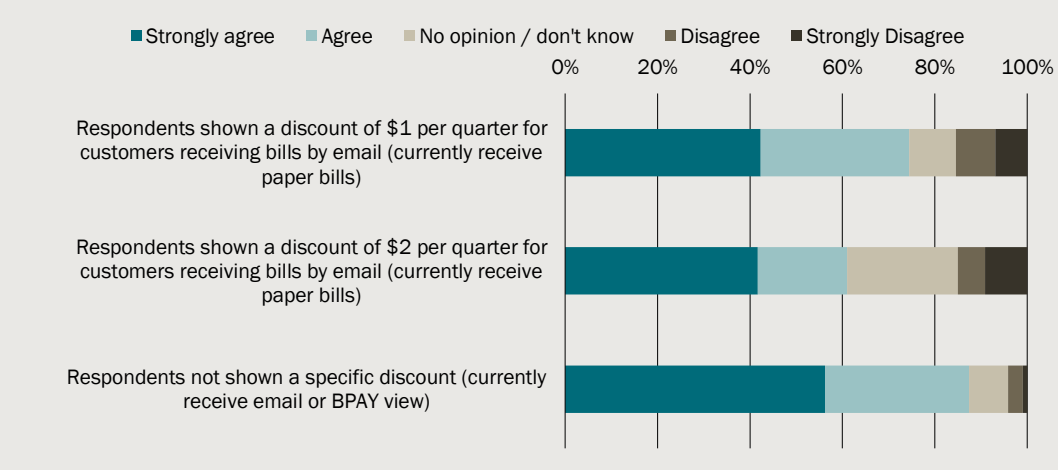


Base bill payers receiving bills by post (n=569), $2 discount (n=139), $1 discount (n=147), $2 fee (n=143), $1 fee (n=140), results reweighted by age and language

- A fee for paper billing would result in slightly more switching than a discount for email billing.
- However, a fee for paper billing is not supported by customers, whereas a discount for e-billing is supported by a majority of customers (figure 8).

2 Hensher, D., Shore, N., and Train, K. 2005. Households' Willingness to Pay for Water Service Attributes. Environmental and Resource Economics 32 (4), 509-531.

8 Citizen views on a discount for e-billing



Do you think that Sydney Water should apply a discount to encourage customers to switch to receiving bills by email?

Base half of citizen bill-paying respondents (n=485), Respondents shown a $1 discount (n=147), Respondents shown a $2 discount (n=139), Respondents not shown a specific discount (n=199), results reweighted by age and language

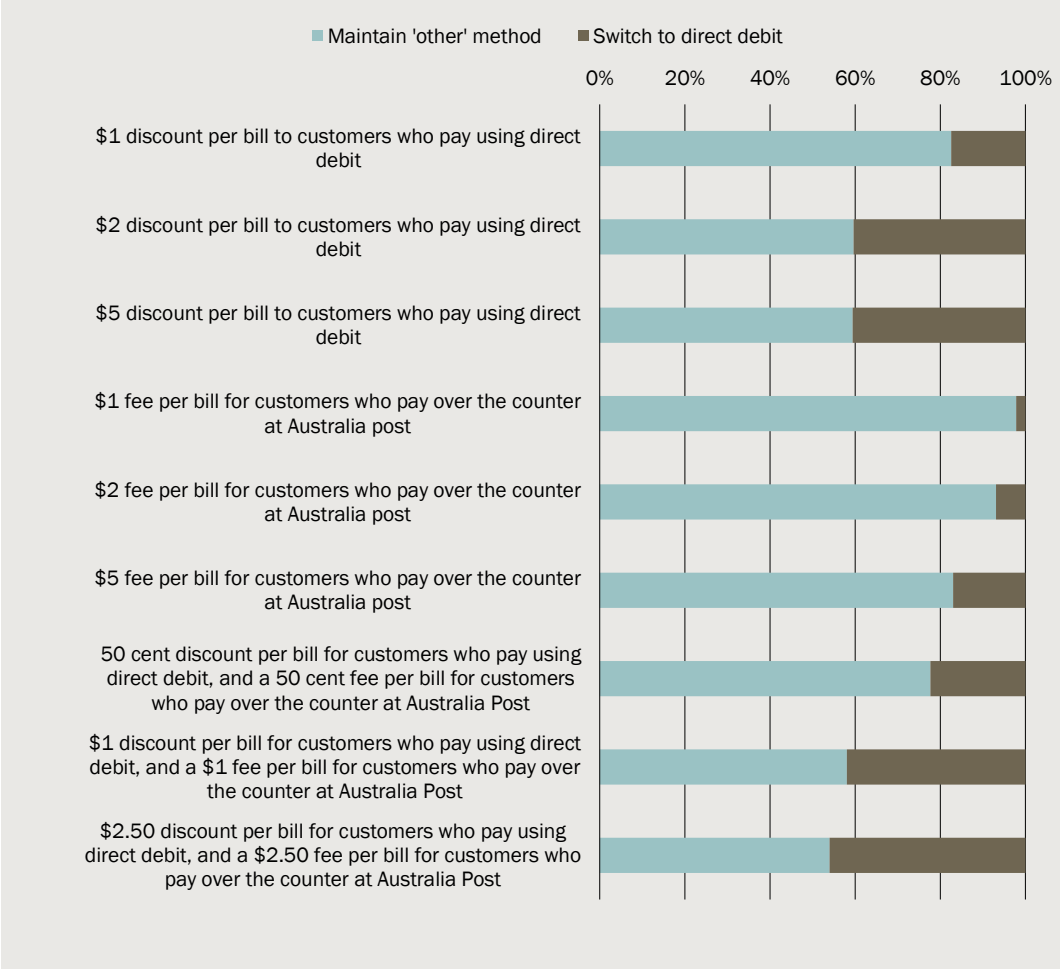
- There are a variety of reasons for customers' chosen payment method, including convenience, credit card points, record keeping, ensuring on-time payment and having control.
- Up to 45 per cent of citizens and one third of businesses currently paying by BPAY or credit card on the website or phone would switch to paying by direct debit from a bank account if a discount was introduced for that method (figure 9).
- However, none of the direct debit discount options presented to customers received clear majority support (figure 10).
- Customers are generally opposed to fees for payment over the counter at Australia Post.

Customer representation

Views on customer representation were gathered using discussions at the deliberative forums and small groups. The key findings from both activities were as follows.

- Customers at the forums favour the use of forums for obtaining community feedback, supplemented by group discussions and online surveys.
- Customers have concerns about the representativeness of advisory panels, phone surveys and social media.
- There was no awareness of the Customer Council among participants.
- After it was explained to them, customers supported the idea of the Customer Council (if used with other forms of engagement).
- Most saw it as a 'mid-tier' consultation group to represent special and minority interests (thereby it was seen by some as a politically correct, tick box exercise).

9 Citizen payment method switching

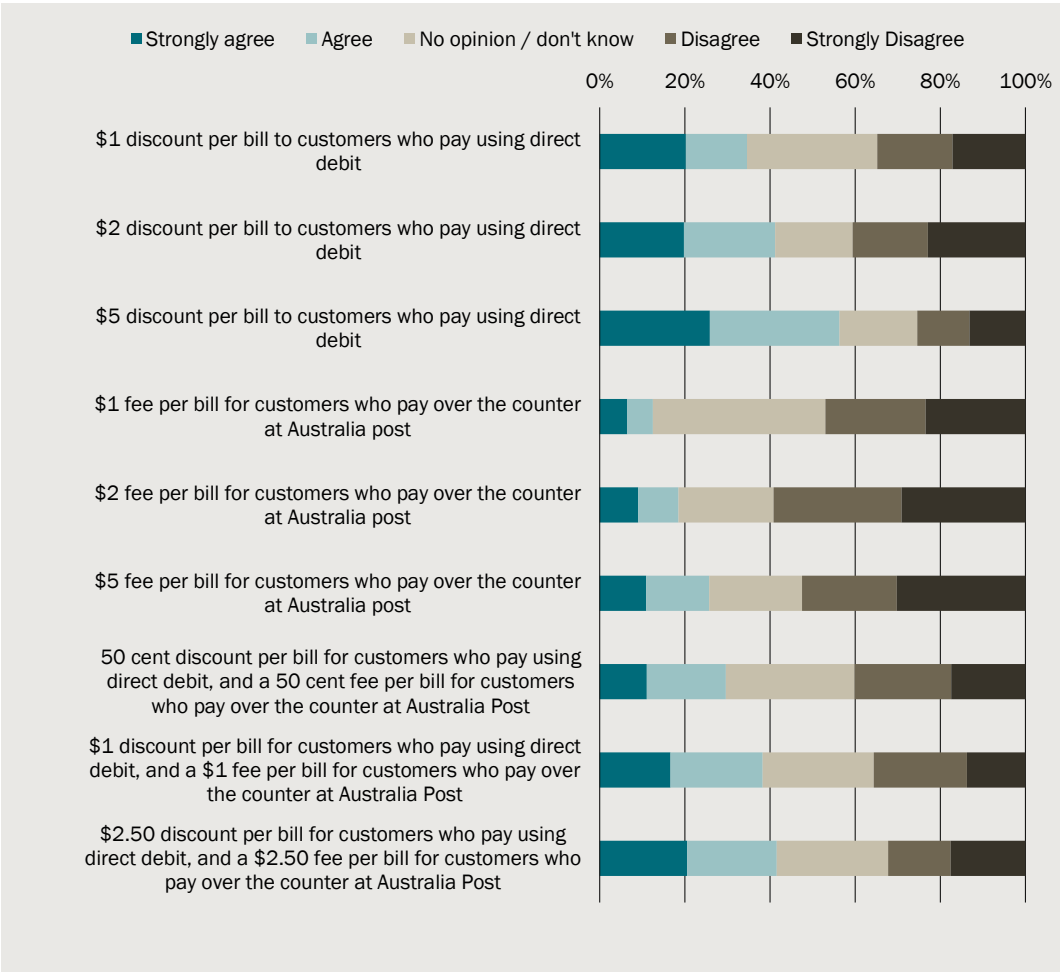


If Sydney Water introduced a ..., which method would you use?

Base respondents using payment method other than direct debit or Australia Post (n=627), respondents shown $1 DD discount (n=69), $2 DD discount (n=72), $5 DD discount (n=65), $1 AP fee (n=73), $2 AP fee (n=69), $5 AP fee (n=60), $0.50 fee and discount (n=71), $1 fee and discount (n=69), $2.50 fee and discount (n=79), results reweighted for age and language

- The Customer Council as it currently stands is not seen as representing 'regular' customer views. However, they found it difficult to see how regular customers could be included.
- Many thought that the Council should be left as is, possibly with a different name (as it is not a Council made up of customers), and that mass customer views should be obtained by more traditional and robust methods such as forums, surveys and group discussions.

10 Citizen views on fees and discounts for payment method



Do you think that Sydney Water should make this pricing change?

Base bill-paying citizens (n=971), respondents shown $1 DD discount (n=107), $2 DD discount (n=110), $5 DD discount (n=108), $1 AP fee (n=108), $2 AP fee (n=109), $5 AP fee (n=105), $0.50 fee and discount (n=108), $1 fee and discount (n=105), $2.50 fee and discount (n=111), results reweighted for age and language

1 Introduction

Sydney Water is committed to improving its overall customer value proposition by putting customers at the heart of everything it does. Sydney Water has promised:

> …to make every one of our customers proud by giving them a voice in what we do, and playing our role in creating liveable communities.
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> This means we will involve customers in the big decisions that impact them…[3]

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Chapter 2 describes the engagement activities. Chapter 3 describes the content of the engagement and the detailed techniques used to discover customer preferences. Chapter 4 describes the customers that participated in the engagement and Chapters 5 to 10 set out the results and findings from the engagement. This detailed report is accompanied by a summary report, suitable for a non-technical audience.

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3 Sydney Water 2016, Sydney Water Customer Toolkit, December, p. 5.

2 How we talked with customers

- **In total, we engaged with around 2 277 customers – 2 011 citizens and 266 small and medium businesses**

The engagement employed a range of activities to ensure an inclusive and accessible approach that gives all customers a voice, and to apply the most effective techniques to each topic and questioning area.

2.1 Engagement activities

- Two pilot deliberative forums with Sydney Water staff at Parramatta and Potts Hill.
- Six deliberative forums with between 70-91 citizens participating in each forum (472 citizens in total), held in:
  - Penrith;
  - Chatswood;
  - Wollongong;
  - Bankstown;
  - Parramatta; and
  - CBD.
- Six group discussions with 7-8 people in each group (46 customers in total):
  - one Mandarin in-language group;
  - one Arabic in-language group;
  - two financially-vulnerable customer groups; and
  - two small-medium enterprises groups.
- An online survey, completed by:
  - 1508 citizens; and
  - 251 small-medium enterprises.

Deliberative forums

Dates and locations

Two pilot deliberative forums were held with staff in Parramatta and Potts Hill in late February 2018.

Six deliberative forums with citizens were held in late February and March 2018 at the locations set out in table 2.2. These locations corresponded to six regions covering all of Sydney Water's operating area across Sydney, Wollongong and Blue Mountains.

2.2 Deliberative forums

Location	Venue	Date	Participants
Penrith	Penrith Panthers	28/02/2018	91
Chatswood	The Chatswood Club	05/03/2018	79
Wollongong	WIN Stadium	07/03/2018	74
Bankstown	Bankstown Sports Club	12/03/2018	70
Parramatta	Parramatta RSL	15/03/2018	76
CBD	City Tattersalls Club	19/03/2018	82
Total			**472**

Source: Woolcott Research and Engagement

Summary statistics on the characteristics of participants are provided in Chapter 4.

Approach

The forums consisted of a mix of round table discussions, presentations/speakers from the front, participant response and feedback sessions from tables (so that participants could hear the views from other tables in the room). Participants spent most of the time working in small groups on tables of eight to ten.

Each forum ran from 5.30pm to 9.00pm on weekday evenings. This timing allowed those will a full-time job to attend the forums and provided enough time for the provision of detailed information so that participants were able to develop a clear understanding of the issues and of the options facing them.

Woolcott Research provided a lead facilitator, Ian Woolcott (who chaired the sessions and managed the flow and timing), eight table facilitators and a support staff member. The Woolcott Research table facilitators ensured that all issues were covered in the discussions on tables and that everyone's views were heard and captured. They ensured that no one participant dominated the discussion at their table and that everyone had a chance to have their say and provide feedback. They also probed into issues that arose within the discussion to ensure that sufficient detail was gained. The facilitator also ensured that all citizens understood how to participate in the whole-of-forum polling process on key questions at several points during the forums.

Laptops were used at each table for facilitators to capture the table's discussions. Each laptop was set up to offer prompts to guide the discussion and time-coded storage of group discussion summaries, which were downloaded into grids for the analysis.

Keypad polling was also included whereby participants were each given a handheld device that was used to answer multiple-response questions shown on screen, with results given in real time.

Each table included a mix of demographics in terms of age, gender and language.

Sydney Water staff presented information to the forum and were on hand to provide answers to any questions participants had about the issues.

The content of the forums is described in detail in Chapter 3.

Discussion groups

Dates and locations

Six discussion groups were held during March 2018 with the customer segments set out in table 2.3.

2.3 Discussion groups

Customer segment	Location	Date	Participants
In-language (Mandarin)	Pagewood	12/03/2018	8
In-language (Arabic)	Greenacre	14/03/2018	8
Financially vulnerable	Parramatta	26/03/2018	7
Financially vulnerable	CBD	27/03/2018	8
Small-medium enterprise	Parramatta	26/03/2018	8
Small-medium enterprise	CBD	27/03/2018	7
Total			**46**

Source: CIE/Woolcott

Summary statistics on the characteristics of participants are provided in Chapter 4.

Approach

Although the forums involved people from diverse backgrounds, including citizens speaking a language other than English at home (LOTE), small-medium enterprises (SMEs) and those on low incomes, it is best practice for engagement programmes to include supplementary engagement with these groups, to ensure their voices are heard.

Two 'in-language' group discussions were conducted with people who did not speak English well or at all. One was conducted with Mandarin speakers and one with Arabic speakers, in locations with large populations of these speakers. These languages were chosen because they have the highest number of speakers in the Greater Sydney area other than English. They were conducted by bilingual researchers in the participants' first language by the Cultural and Indigenous Research Centre Australia (CIRCA). They were held in settings where participants were comfortable and able to speak freely.

Two group discussions were conducted with customers in financial hardship, one in Parramatta and one in the CBD. Customers who had had difficulty paying bills (i.e. had asked for an extension) in the last 12 months and who held a health/low income card were recruited for these sessions.

Two discussion groups were also conducted with small and medium size enterprises (SMEs). The participants were the water decision makers in the business, i.e. those who would have a role in interacting with Sydney Water either if there was a water interruption or wastewater overflow, or by paying water bills.

Woolcott Research and Engagement facilitated the financial hardship and SME groups. These groups lasted for approximately 1.5 hours and were conducted at 6pm and 7.30pm on a weekday evening. They were conducted at research facilities so that Sydney Water staff could view the sessions, but they did not present the information.

The content of the discussion groups is described in detail in Chapter 3.

Online survey

The engagement program included two online surveys – one with citizens and one with SMEs. It was programmed and hosted by Woolcott Research and Engagement and the survey sample was obtained through a reputable and quality-assured research panel provider: Lightspeed Research.

The survey was approximately 15 minutes in length. It was live from 16 March 2018 to 29 March 2018. It was completed by 1508 citizens and 251 SMEs, after exclusion of invalid responses.

Summary statistics on the characteristics of participants are provided in Chapter 4.

The content of the survey is described in detail in Chapter 3.

3 What we talked with customers about

Approach

This project addressed both long-term and short-term issues, with a focus on co-imagining the future and identifying the outcomes from Sydney Water's services that matter most to customers, as well as delving deeper into specific issues of importance to the imminent review of Sydney Water's operating licence.

The topics of the engagement are summarised in box 3.1 and detailed in the remainder of this chapter.

3.1 Topics covered by the customer engagement

The outcomes that customers value most in the context of the services that Sydney Water provides, or could reasonably be expected to provide.

The relative inconvenience to customers from various continuity, pressure, overflow and customer service events, including:

a) the amount of time for the notice to be given by Sydney Water;

b) the method of providing notice to the customer;

c) whether sewer overflows are internal or external to the property;

d) the time of day/night; and

e) the frequency of the event (including repeats within 12 months).

The levels of support for potential amendments to Sydney Water's Operating Licence rebates including:

a) providing rebates on application, rather than automatically, in specified circumstances such as for events occurring late at night; and

b) applying rebates to the usage charge, so they are more likely to be passed on to the occupant.

The nature of engagement with Sydney Water, including the role and composition of Sydney Water's Customer Council.

Whether Sydney Water should offer discounts and/or charge fees for bill delivery and/or payment channel usage.

Likely bill delivery and payment channel switching for various fees/discounts.

Each topic was addressed using techniques suited to its complexity and materiality. For example, the topic of *fees and discounts for channel usage* was addressed in the online survey since little background explanation was required and group discussion was not necessary. Customer representation, in contrast, required explanation by facilitators and group discussion was needed to work through the issues and draw out customer views. It was therefore addressed in the forums and discussion groups, but not in the survey.

3.2 Engagement techniques by topic

	Deliberative forums	Discussion groups	Online survey
Customer priorities	✓	✓	✓
Measuring service performance	✓	✓	✓
Rebates	✓	✓	
Customer representation	✓	✓	
Fees and discounts for channel usage			✓

Source: CIE/Woolcott

Developing engagement materials

The questions and stimulus material for the research were developed in close consultation with Sydney Water. Subject matter experts within the business provided information packs, which were used by the CIE and Woolcott to develop draft questionnaires, forum stimulus material and keypad polling questions. We worked with Sydney Water to refine this draft material to ensure coverage of the most important issues and plausibility and accuracy of service scenarios specified in the material.

Sydney Water developed the forum presentations on each topic, with review and advice from CIE and Woolcott.

The forum presentations, stimuli and keypad polling questions were tested using two pilot forums with Sydney Water staff. Several refinements were made to the materials in response to feedback from these pilot forums; for example:

- removing some technical complexity from presentations;
- adjusting the time allocated to various sections of the agenda;
- clarifying points of confusion; and
- revising questions that were perceived as leading.

The survey questionnaire drew on the finalised forum materials for topics relating to customer priorities and measuring service performance.

Customer priorities

A key starting point for the engagement was to confirm, at a high level, what matters most to customers. All of the engagement activities were used to address this topic, with

a view to identifying a list of 5-8 priority customer outcomes that could potentially be used as categories for planning and performance measurement in the future.

Forums, groups and interviews

Participants at the forums were given a brief presentation by a Sydney Water executive on the services that Sydney Water provides. Participants at discussion groups were given a handout covering the same information. Participants in both activities were then asked to discuss the following questions in small groups:

- What do you think Sydney Water does well?
- What don't they do as well? What are the things they could improve and how?
- Have you had any contact/interaction with Sydney Water other than just paying bills?
- Have you experienced any 'pain points' in any interactions you have had with Sydney Water (including bill paying)? What are they?

The purpose of these questions was to identify, in an unprompted manner that did not bias customer views, aspects of Sydney Water services that are important to customers. The questions framed in the negative around pain points and potential improvement were included based on feedback from the pilot forums to provide a better transition to the subsequent section of the forum which included a discussion of the extent to which existing performance measures cover what's important to customers. Existing performance measures are framed in the negative in the sense that they focus on the number of service failures.

Participants were then given the following exercise (including the handout at appendix C):

> In the future, what do you think would make an ideal water and wastewater service provider? What do you think are the critical things that Sydney Water should focus on to ensure customers are satisfied?
>
> Each table to create a 'value tree' on the flipchart

A nominated spokesperson at each table was chosen to feedback their table's high level values to the larger group.

The purpose of this exercise was to reach consensus based on group discussion within each forum on the outcomes that matter most to residential customers.

Towards the end of each forum, the most common values identified by participants in this exercise were presented to the forum, with a keypad polling question asking participants to select from the list the three most important values to them personally. The purpose of this polling question was to gain an understanding of the variation in priorities across participants following group discussion. Participants were not asked to rank more than three values (e.g. selecting five values, as in the prompted survey question discussed below) as it was judged that this would have been difficult for participants to complete in the time allotted and resulted in too many participants requiring assistance with operating their keypads.

Further detail on the agenda for the forums is provided in appendix B.

Online survey

The survey included both unprompted and prompted questions about the outcomes from Sydney Water that are most important to customers. The unprompted question asked respondents to identify the three things they want most from Sydney Water. The prompted question asked respondents to select the five most important outcomes from a list of 14 outcomes, with short descriptions. This list was based on previous Sydney Water survey findings as well as findings from the 'value tree' exercise at the first two deliberative forums conducted as part of this project.

Further detail on the questionnaire is provided at appendix G.

Measuring service performance

A key objective of this engagement project was to gain a deeper understanding of the relative value placed by customers on different aspects of Sydney Water's services, with a view to informing the ways in which performance should be measured and the ways in which service standards and rebates should be specified. Each of the engagement activities addressed different aspects of this topic.

Forums, groups and interviews

Participants at the forums were given a brief presentation by a Sydney Water representative on:

- the operating licence and other regulation of Sydney Water's services;
- the system performance standards;
- wastewater overflows and how they affect customers;
- water interruptions and how they affect customers;
- water pressure and how low pressure affects customers; and
- examples of service attributes not directly regulated, including customer service.

The standards were explained only in brief to avoid leading participants and to ensure the discussions among participants focused on the aspects of service that matter most to them.

Participants at discussion groups were given a handout covering the same information. Participants in both activities were then asked to discuss questions related to the following issues in small groups:

- reactions to existing service performance standards;
- their experience of service failures and levels of inconvenience;
- how inconvenience varies with:
  - the time of day at which service failures occur;

  - whether service failures are one-off or repeat; and
  - communication during the failure and notice period given for planned events; and
- the most important elements of customer service.

The purpose of these discussions was to gather qualitative information about the specific aspects or attributes of service failures that matter most to customers and to facilitate consideration of the issues by participants ahead of keypad polling.

Participants were provided with the specific trade-off questions to guide this discussion (see the handout in appendix D). These trade-offs were developed to reflect real situations frequently faced by Sydney Water in which it must make assumptions about customer preferences.

In the forums, keypad polling was used to collect individual preferences after these table discussions had taken place. The polling questions covered:

- identifying the best and worst times to experience a water supply interruption;
- views on when it is preferable to delay fixing a water leak due to inconvenience from possible repair noise or the water supply interruption;
- attitudes towards repeat service failures;
- whether customers prefer better communication or shorter response times during a supply interruption; and
- preferred methods of notice for planned interruptions.

These questions were designed to address practical trade-offs faced by Sydney Water in the allocation of its resources.

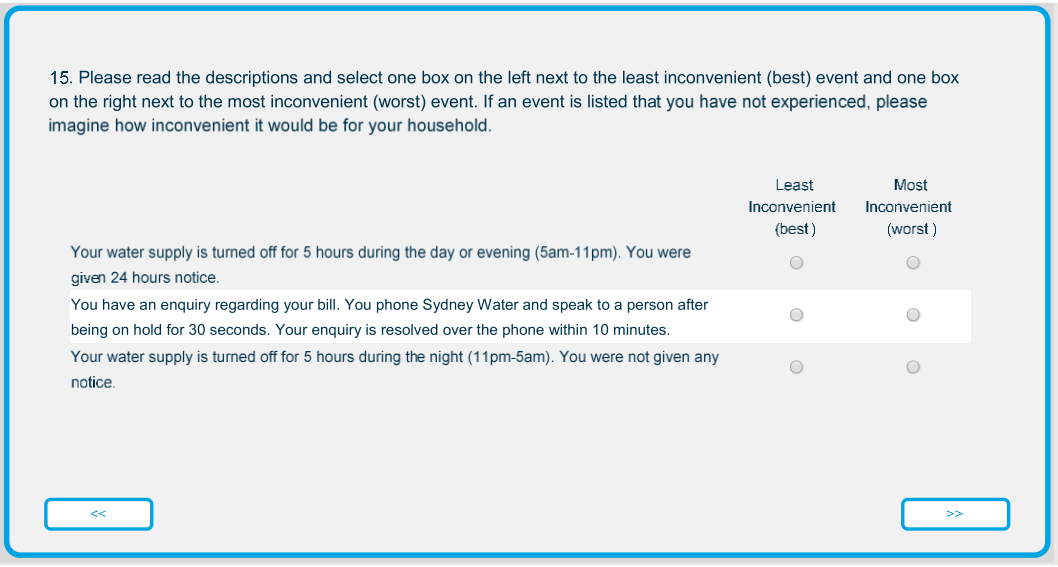
Further detail on the agenda for the forums, including these polling questions, is provided in appendix B.

Online survey

The survey included a best-worst scaling (BWS) exercise designed to rank the average level of customer inconvenience from 19 specified service failure events. Respondents were presented with a brief explanation of water interruptions, wastewater overflows, water pressure failures, discoloured water and billing enquiries by phone and how those events can affect customers. Each respondent answered six BWS questions. Each question presented three events and asked the respondent to identify the least inconvenient (best) event and most inconvenient (worst) event (for an example, see figure 3.3).

The questions were drawn from a balanced incomplete block design (BIBD) of 114 questions located using the *find.BIB()* function in the R package, *crossdes*. A BIBD is a set of questions over which each specified event appears an equal number of times and each possible pair of events appears in a question together an equal number of times. Blocks of six questions were constructed to minimise the correlation between events and blocks. Each respondent was assigned one block of questions. The order in which events were listed within each question was rotated.

3.3 Example of a best-worst scaling question



Data source: CIE/Woolcott survey questionnaire

The 19 events were selected to include the events currently covered by service performance standards and rebates, with variations on dimensions such as time of day, duration and notice given. Some events not currently covered by standards and rebates, such as wastewater overflows on public land and telephone customer service for billing enquiries, were also included so that the results would be able to address questions about whether existing regulations were focused on the most important service attributes.

3.4 Events included in best-worst scaling questions

ID	Event
1	Your water supply is turned off for 5 hours during the day or evening (5am–11pm). You were given 48 hours' notice.
2	Your water supply is turned off for 5 hours during the day or evening (5am–11pm). You were given 24 hours' notice.
3	Your water supply is turned off for 5 hours during the day or evening (5am–11pm). You were given 4 hours' notice (via SMS).
4	Your water supply is turned off for 5 hours during the night (11pm–5am). You were given 48 hours' notice.
5	Your water supply is turned off for 5 hours during the day or evening (5am–11pm). You were not given any notice.
6	Your water supply is turned off for 5 hours during the night (11pm–5am). You were not given any notice.
7	A water pressure failure (slow flow of water) for 1 hour during the day or evening (5am–11pm).
8	A water pressure failure (slow flow of water) for 15 minutes during the day or evening (5am–11pm).
9	A water pressure failure (slow flow of water) for 1 hour during the night (11pm–5am).
10	A water pressure failure (slow flow of water) for 15 minutes during the night (11pm–5am).
11	A wastewater overflow inside your building. Your service is restored in 3 hours and the affected area is cleaned and repaired in 3 days.

ID	Event
12	A wastewater overflow outdoors on your property. The overflow is stopped and the affected area is cleaned in 5 hours.
13	A wastewater overflow at a park near your property. The overflow is stopped and the affected area is cleaned in 5 hours.
14	The water running from your tap is discoloured for a period of two hours during the day or evening
15	Your water supply is turned off three times (without notice) in a 12-month period, each time lasting for 2 hours during the day or evening
16	Two wastewater overflows outdoors on your property in a 12-month period. In each instance, the affected area is cleaned in 3 hours.
17	You have an enquiry regarding your bill. You phone Sydney Water and speak to a person after being on hold for 30 seconds. Your enquiry is resolved over the phone within 10 minutes.
18	You have an enquiry regarding your bill. You phone Sydney Water and speak to a person after being on hold for 5 minutes. Your enquiry is resolved over the phone within 10 minutes.
19	You have an enquiry regarding your bill. You phone Sydney Water and speak to a person after being on hold for 30 seconds. Sydney Water is unable to resolve your enquiry over the phone and forwards it to another department. You get a call back 2 days later and your enquiry is resolved.

Source: CIE/Woolcott

Rebates

While questions about which events are most deserving of a rebate can be informed in part by the ranking of events described above, there are further questions about rebate policy that required tailored engagement.

Forums, groups and interviews

Participants at the forums were given a brief presentation by a Sydney Water representative on:

- the events that currently attract a rebate;
- additional description of events not covered in the previous session, namely discoloured water and boil-water alerts;
- rebate arrangements in other jurisdictions; and
- impediments to providing rebates to occupants as distinct from property owners.

Participants at discussion groups were given a handout covering the same information.

The group discussions at forums and small groups covered:

- events for which customers would expect a rebate;
- whether rebates should be paid automatically or on application; and
- the importance of finding ways to provide rebates to tenants rather than landlords.

These issues were also the subject of keypad polling questions.

Each table of participants were then asked to undertake a budget allocation exercise as a group. The exercise involved allocating 100 tokens to 10 specified events according to the level of rebate each event should attract. The events aligned with existing rebate categories, with additional variants for water interruptions based on the time of day and amount of notice given and variants for water pressure failures based on the duration of the failure.

The purpose of this exercise was to develop an understanding of customer views on the relative level of rebates and gather information on the *relative magnitude* of inconvenience from different events, as distinct from the *ranking* of inconvenience derived in relation to the larger number of events in the BWS questions in the survey.

Online survey

The survey did not include questions directly addressing rebates. However, the BWS questions described in the 'Measuring service performance' section of this chapter will elicit customer' ranking of the inconvenience of a range of 19 events, including events current attracting rebates. The results of these questions will be relevant to decisions about the definitions of events attracting rebates and the relative levels of rebate amounts.

Discounts and fees for channel usage

The topic of discounts and fees for channel usage was covered only in the survey and only for respondents indicating that they receive bills from Sydney Water. Questions were included to assess, for both bill delivery method (typically either by post or email) and payment method (e.g. direct debit, BPAY, over the counter at Australia Post):

- the respondent's current chosen method;
- reasons for choosing that method; and
- in the event that a specified fee and/or discount is introduced:
  - which method the respondent would choose; and
  - whether the respondent supports the pricing change.

The specified fee/discount varied across respondents. In relation to bill delivery methods, each respondent that indicated a current bill delivery method other than email was presented with one of the following:

- a fee of $1 per quarter for customers receiving paper bills;
- a fee of $2 per quarter for customers receiving paper bills;
- a discount of $1 per quarter for customers receiving bills via email; or
- a discount of $2 per quarter for customers receiving bills via email.

In relation to bill payment methods, each respondent was presented with one of the following:

- a $1 discount per bill to customers who pay using direct debit from a bank account;
- a $2 discount per bill to customers who pay using direct debit from a bank account;

- a $5 discount per bill to customers who pay using direct debit from a bank account;
- a $1 fee per bill for customers who pay over the counter at Australia Post;
- a $2 fee per bill for customers who pay over the counter at Australia Post;
- a $5 fee per bill for customers who pay over the counter at Australia Post;
- a 50 cent discount per bill for customers who pay using direct debit from a bank account, and a 50 cent fee per bill for customers who pay over the counter at Australia Post;
- a $1 discount per bill for customers who pay using direct debit from a bank account, and a $1 fee per bill for customers who pay over the counter at Australia Post; or
- a $2.50 discount per bill for customers who pay using direct debit from a bank account, and a $2.50 fee per bill for customers who pay over the counter at Australia Post.

The two categories of payment method subject to fees and discounts – Australia Post and direct debit – were chosen because they are the highest and lowest cost payment methods for Sydney Water. The fee and discount levels were chosen to cover the full range of values Sydney Water could plausibly propose to implement. Both fees and discounts were included to test whether switching is likely to be more responsive to one than the other.

A statement was included noting the existing 0.4 per cent fee for credit card payments and noting that customers experiencing financial hardship and pensioners would likely be exempt if other fees for bill payment were introduced.

Customer representation

The topic of customer representation was covered only in the forums, groups and interviews. Views were gathered by recording qualitative findings from small group discussions. Discussion was initiated with the following questions:

- What is the best way for people who live or work in the Sydney Water area to be involved in Sydney Water's decision making? e.g.
  - Directly in face-to-face forums, focus groups
  - Online surveys, forums
  - Through advisory groups, with representatives from community organisations
- Did you know that Sydney Water has a Customer Council?

Participants were then given a handout describing the Customer Council (see appendix F) and discussed the following questions:

- What are your initial thoughts on the Customer Council?
- What do you think of the Customer Council as a way to get customers' views on issues? A good way or not?
- Who do you think should be involved in the Customer Council – what do you think of the current membership? Does it represent the views of those who live or work in Greater Sydney or are there any gaps?

- Who do you think should pick the members of the Customer Council?

4 Who we talked with

Approach

Sydney Water defines its customer base as every person (citizen) and business that comes into contact with its products and services.

- The customer base is large:
  - Sydney Water services around 4.5 million people across not only Sydney, but parts of the Illawarra region and the Blue Mountains.
- The customer base is diverse, with the 2016 Census indicating that:
  - just 57 per cent of people in Sydney were born in Australia, compared to a national average of 67 per cent;
  - only 33 per cent of people in Sydney had both parents born in Australia, compared to a national average of 47 per cent;
  - 36 per cent of people speak a language other than English at home, with other languages spoken including Mandarin (4.7 per cent), Arabic (4.0 per cent), Cantonese (2.9 per cent), Vietnamese (2.1 per cent) and Greek (1.6 per cent);
  - only 57 per cent of dwellings in Sydney are standalone houses, compared to a national average of 73 per cent, with flats and apartments comprising 28 per cent of Sydney dwellings; and
  - around 17 per cent of Sydney households had gross weekly income of less than $650, while 24 per cent had income of more than $3 000.[4]

Business and industry are also an important part of Sydney Water's customer base. In 2015-16, Sydney's gross domestic product was around $400 billion and represented around one quarter of the national economy.[5]

This project was designed to cater for both the scale and diversity of Sydney Water's customer base. The following groups were targeted for engagement:

- Citizens: anyone who uses Sydney Water's products or services, including:
  - LOTE citizens; and
  - Financially vulnerable citizens.
- Businesses: any business that uses Sydney Water's products or services, including small-medium enterprises.

Importantly, citizens and businesses may be property owners that pay Sydney Water bills or they may be tenants that do not directly pay bills.

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4 Australian Bureau of Statistics, 2016 Census quickstats, Greater Sydney GCCSA.

5 SGC Economics & Planning 2016, Sydney GDP 2015-2016, 5 December.

The techniques used to engage each group are shown in table 4.1.

4.1 Customer segmentation

	Citizens other	Citizens LOTE	Citizens financially vulnerable	Small-medium business
Deliberative forums	✓	✓	✓	
Discussion groups		✓	✓	✓
Online survey	✓	✓	✓	✓

Source: CIE/Woolcott

How we recruited participants

Deliberative forums

Recruitment for the forums took place up to two-three weeks before each forum. Participants were recruited through stratified random sampling from the areas surrounding the forum locations. Individual quotas were set for each location, for age, gender, home ownership and LOTE. At the request of Sydney Water, the quotas for home owners were increased slightly to ensure sufficient representation by home owners compared to renters because home owners pay water bills. It was ensured that a good mix of businesses in terms of industry were included. The quotas for each forum are provided below.

4.2 Recruitment quotas for deliberative forums

	18-44	45-64	65+	Male	Female	LOTE	Non-LOTE	Owner (pop'n in brackets)	Renter (pop'n in brackets)
	%	%	%	%	%	%	%	%	%
Penrith	56	30	14	49	51	23	77	66 (66)	34 (34)
Chatswood	49	31	19	48	52	27	73	66 (66)	34 (34)
Wollongong	48	31	21	49	51	14	86	66 (65)	34 (35)
Bankstown	53	30	16	49	51	39	61	66 (64)	34 (36)
Parramatta	55	29	16	50	50	54	46	66 (60)	34 (40)
CBD	60	26	15	49	51	37	63	50 (48)	50 (52)
Total	**54**	**29**	**17**	**49**	**51**	**36**	**64**	**63 (60)**	**37 (40)**

Note: Figures in brackets are the population proportions for dwelling tenure type. Quotas for other categories are consistent with the population.

Source: CIE/Woolcott

People were telephoned at random (primarily through fixed line, but some mobile) and asked for their interest in attending, then those interested completed a short screening questionnaire. For quotas where there were lower responses, some participants were also recruited though market research recruiters and Facebook. Those with personal or professional connections to Sydney Water were screened out; i.e. if they or any immediate members of their family, worked for Sydney Water, any other water or

wastewater utility company, for IPART or in a water quality related role with NSW Health or NSW Environment Protection Authority.

Confirmation telephone calls were made in the week leading up to each forum and followed up by email. Over a hundred participants were recruited for each forum.

All participants received $100 for their participation, to cover any out-of-pocket expenses, and were provided with a light dinner and dessert.

Discussion groups

The LOTE discussion groups were recruited by Cultural and Indigenous Research Australia (CIRCA). The groups consisted of people who did not speak English or did not speak it well and a mix of ages and genders. The Arabic speakers lived in Revesby, Padstow, Greenacre, Punchbowl, Bankstown, Penshurst, Peakhurst, and Condell Park. The Mandarin speakers came from Kingsford, South Hurstville, Maroubra, Kensington, Eastlakes, Waterloo, Mascot and Daceyville. CIRCA bilingual consultants recruited the participants, who were contacted through individual phone calls by the consultant.

All residential participants (LOTE and financial hardship groups) received $80 with the SMEs receiving $125, to cover any out-of-pocket expenses.

The financial hardship and SME groups were recruited through a market research recruiter, Alta Research, who specialises in recruitment for such discussion groups.

All SME participants were water and wastewater decision makers who had a role in interacting with Sydney Water either if there was a water interruption or wastewater overflow or by paying water bills. Small and medium businesses were defined as those with 0-199 employees that did not operate out of home but had a designated premises. As with the forum recruitment, those with personal or professional connections to Sydney Water were screened out. It was ensured that a good mix of businesses in terms of industry were included.

For the financial hardship groups, the definition was that they held a concession/low income healthcare card and had difficulty paying utility bills in the last 12 months (i.e. requested an extension). Again, those who had a personal or professional connection with Sydney Water were screened out, i.e. if they or any immediate members of their family, worked for Sydney Water, any other water or wastewater utility company, for IPART or in a water quality related role with NSW Health or NSW Environment Protection Authority. There were a mix of genders and ages included and over half in each group were owners of their properties (either outright or with a mortgage).

Survey

Panel members for the online research were recruited through Lightspeed Research. The quotas for the citizens version of the survey are provided below. Respondents were provided incentives through the panel's points system, which are likely to equate to between $1.50 and $2.50 per respondent.

4.3 Recruitment quotas for survey

Category	Quota
Age	
18-44	54%
45-64	29%
65+	17%
Gender	
Male	49%
Female	51%
LOTE	
LOTE	36%
Non-LOTE	64%
Home ownership	
Owner	60%
Renter	40%
Location	
Penrith and surrounding regions	11%
Chatswood and surrounding regions	12%
Wollongong and surrounding regions	10%
Bankstown and surrounding regions	20%
Parramatta and surrounding regions	20%
CBD and surrounding regions	27%
Business size[a]	
Sole trader	58.4%
1-19 employees	39.3%
20-199 employees	2.3%

[a] Applies only to recruitment of businesses

Source: CIE/Woolcott

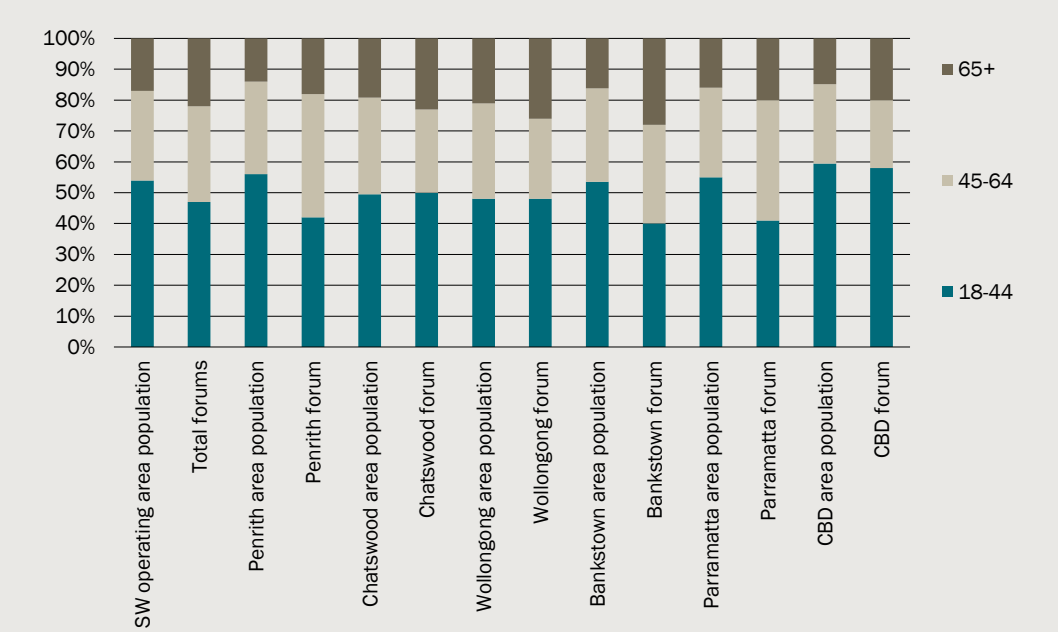
Representative sample

The sections below outline the demographics of the actual participants in the engagement program.

Deliberative forums

The age of attendees at the forums is presented in figure 4.4. There was a good spread of ages represented across the different locations.

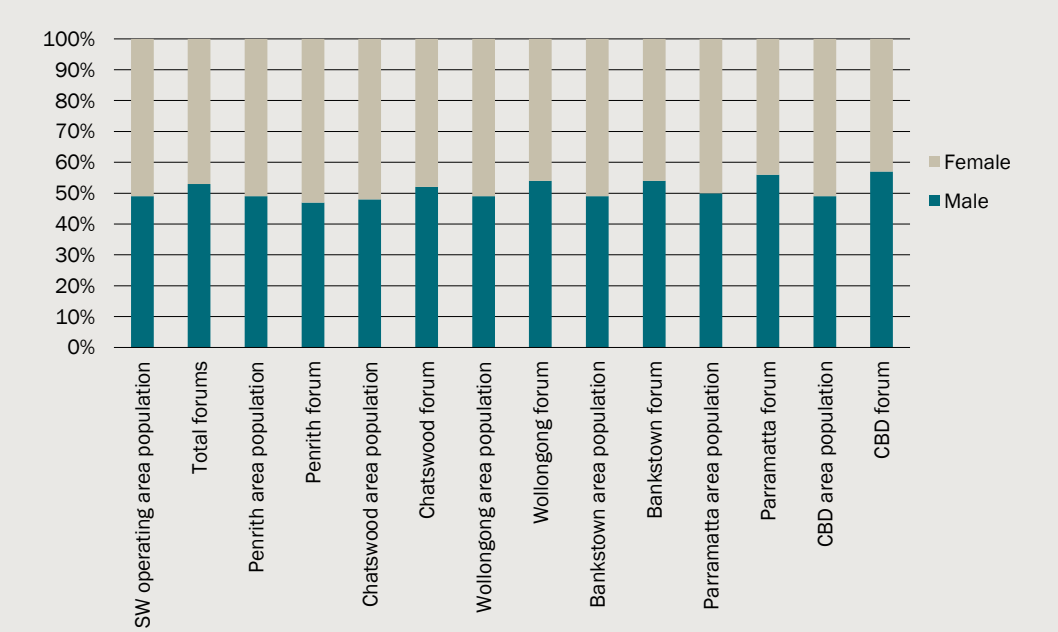
4.4 Age of forum participants and population by location



Base All respondents (n=467); Penrith (n=88), Chatswood (n=82), Wollongong (n=72), Bankstown (n=68), Parramatta (n=75), CBD (n=82), unweighted

Gender representation was approximately 50:50 across the forums.

4.5 Gender of forum participants by location

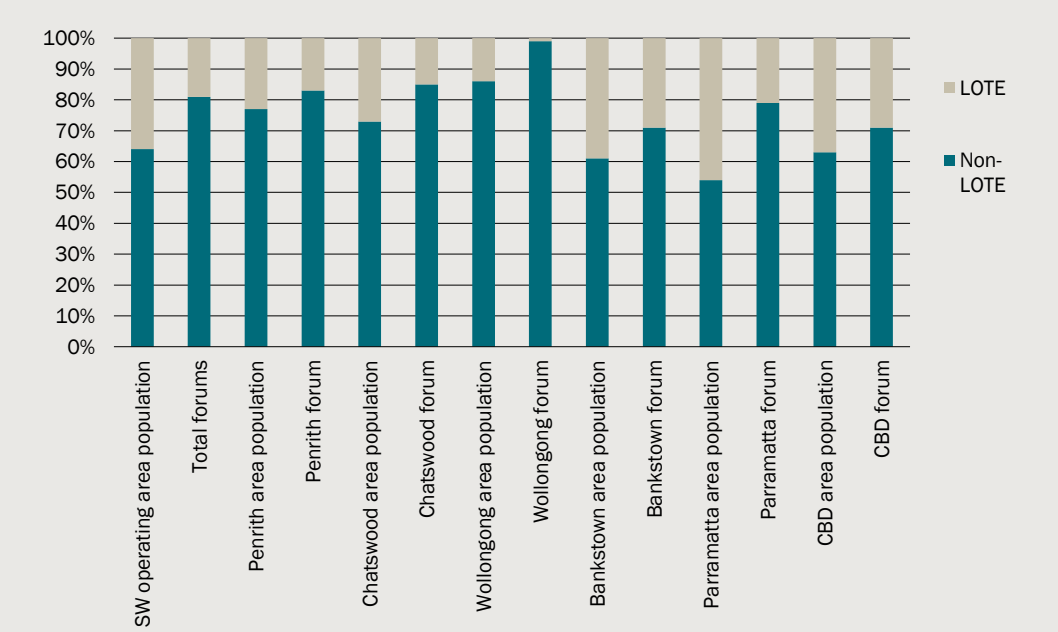


Base All respondents (n=467); Penrith (n=88), Chatswood (n=82), Wollongong (n=72), Bankstown (n=68), Parramatta (n=75), CBD (n=82), unweighted

The proportion of LOTE representation was slightly lower than that required across all forums. This is to be expected since forums conducted in English are typically attended by those who speak English well, though not in all cases (e.g. a customer attended the CBD forum with a Chinese interpreter). The inclusion of in-language groups was used to

ensure further LOTE representation and this variable was also weighted during data analysis of the forum keypad results.

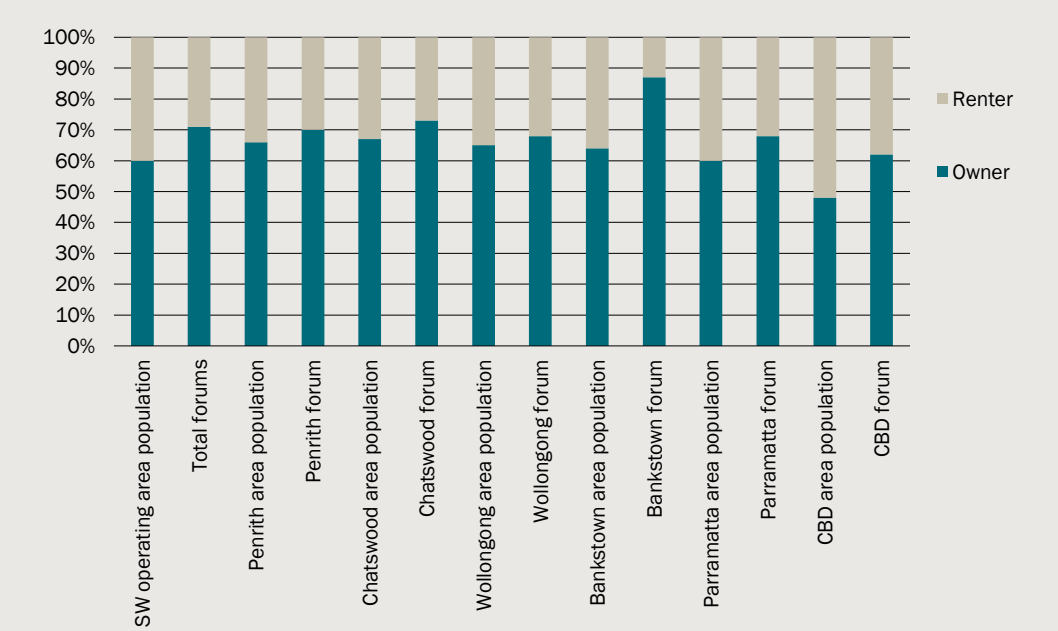
4.6 LOTE forum participants by location



LOTE (Language other than English)
Base All respondents (n=467); Penrith (n=88), Chatswood (n=82), Wollongong (n=72), Bankstown (n=68), Parramatta (n=75), CBD (n=82), unweighted

There was good representation of home ownership across the locations, with the largest proportion of renters being included in the CBD forum.

4.7 Home ownership among forum participants by location



Base All respondents (n=467); Penrith (n=88), Chatswood (n=82), Wollongong (n=72), Bankstown (n=68), Parramatta (n=75), CBD (n=82), unweighted

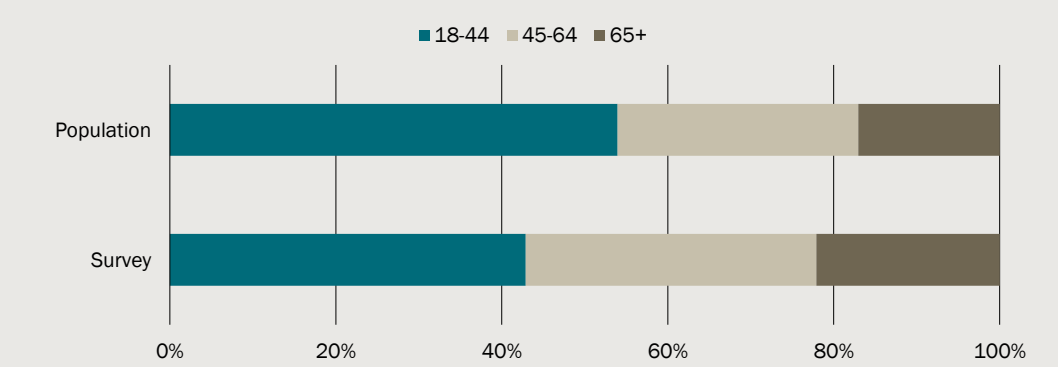
The forum data was also weighted by the six regions to ensure a representative sample across the Sydney Water area for the total results (i.e. CBD to 27 per cent, Parramatta and Bankstown to 20 per cent, Chatswood to 12 per cent, Penrith to 11 per cent and Wollongong to 10 per cent).

Online survey

Citizens

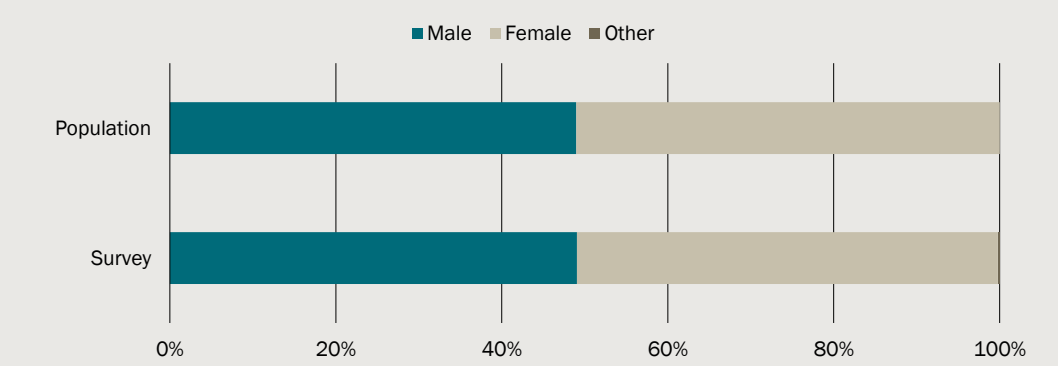
The citizens component of the survey was completed by 1508 respondents. The sample was broadly representative of residents in Sydney Water's area of operations in terms of age, gender, LOTE, home ownership status and location. Data was weighted by LOTE and age during analysis to ensure accurate representation.

4.8 Citizen survey respondents by age



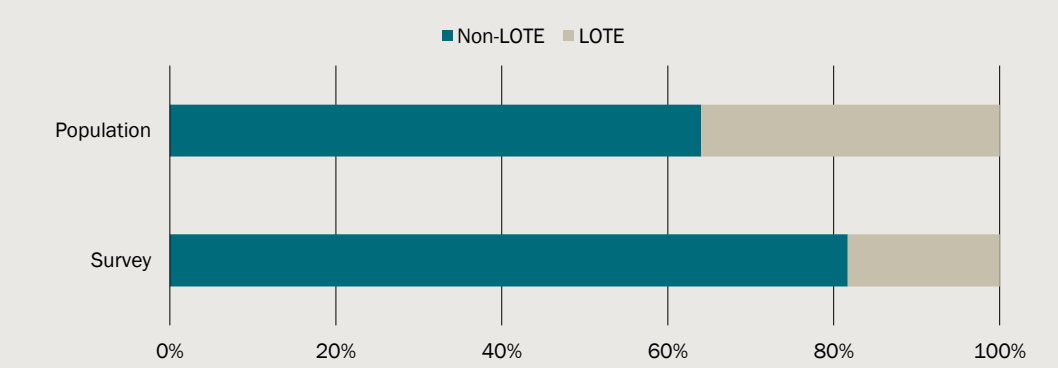
Base All respondents (n=1508)

4.9 Citizen survey respondents by gender



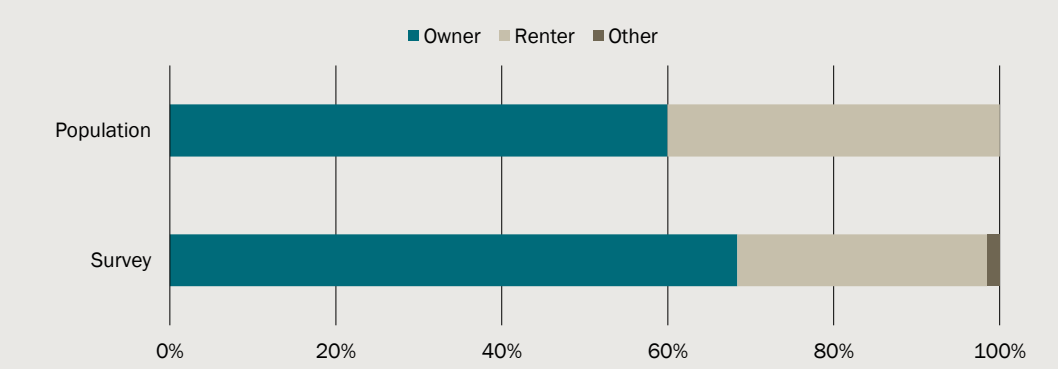
Base All respondents (n=1508)

4.10 Citizen survey respondents by LOTE



LOTE (Language other than English)
Base All respondents (n=1508)

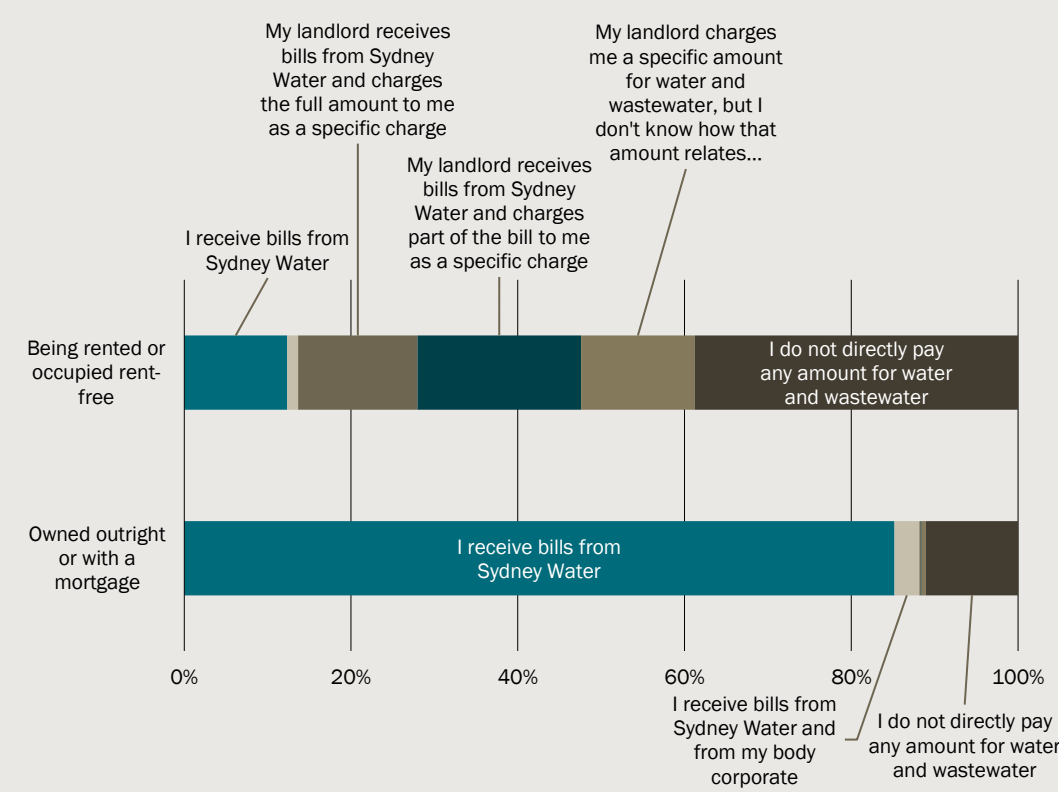
4.11 Citizen survey respondents by home ownership



Base All respondents (n=1508)

Figure 4.12 shows that around 88 per cent of home owners surveyed indicated that they receive bills from Sydney Water, while 93 per cent of renters indicated they do not receive bills directly from Sydney Water. Bills are passed through to renters to varying degrees, with 39 per cent of renters indicating they do not directly pay any amount towards water and wastewater, 20 per cent indicating their landlord passes on part of the bill, 14 per cent indicating their landlord passes on the bill in full, and 14 per cent indicating they pay an amount but don't know how it relates to the Sydney Water bill.

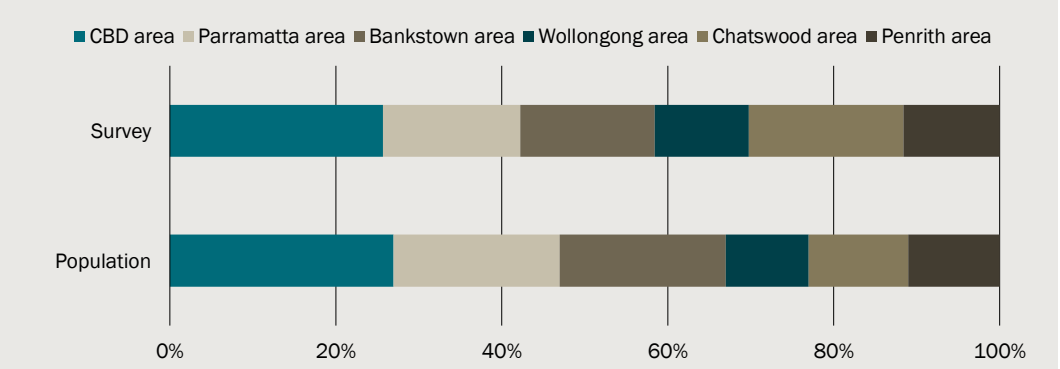
4.12 Citizen home ownership by billing arrangement



Base All respondents (n=1508)

All regions within Sydney Water's operations were represented in the survey, with the largest number drawn from the CBD and surrounding regions.

4.13 Citizen survey respondents by location



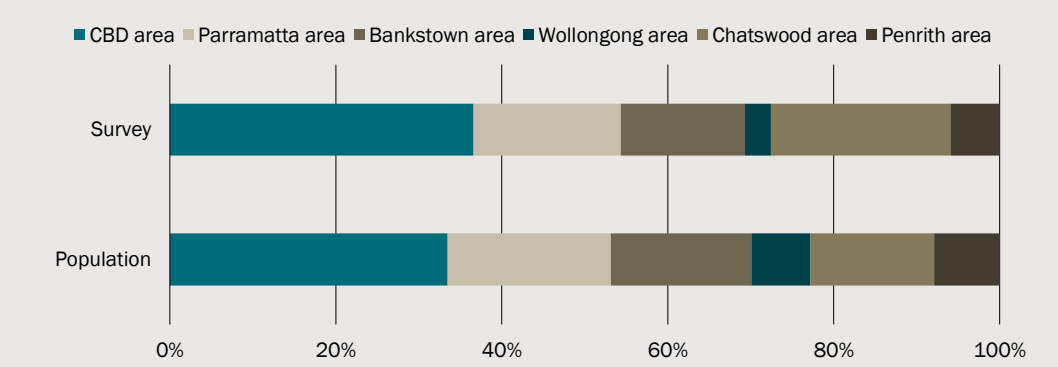
Base All respondents (n=1508)

Small-medium businesses

The business component of the survey was completed by a sample of 251 small-medium businesses. The sample was broadly representative of businesses in Sydney Water's area of operations in terms of employment size and location.

All regions within Sydney Water's operations were represented in the survey, with the largest number drawn from the CBD and surrounding regions, consistent with the population.

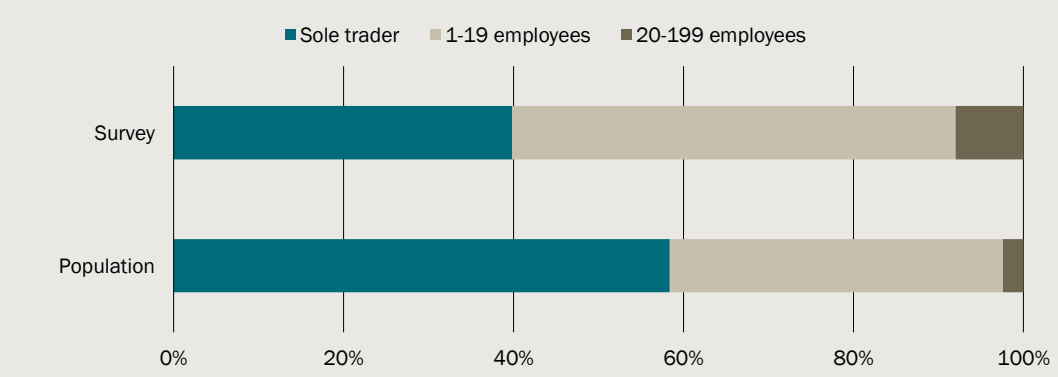
4.14 Business respondents by location



What is the postcode where your business is based?
Base all respondents (n=251)

Businesses mainly represented small businesses (sole traders and 1-19 employees) with a small number of medium sized businesses of 20-199 employees.

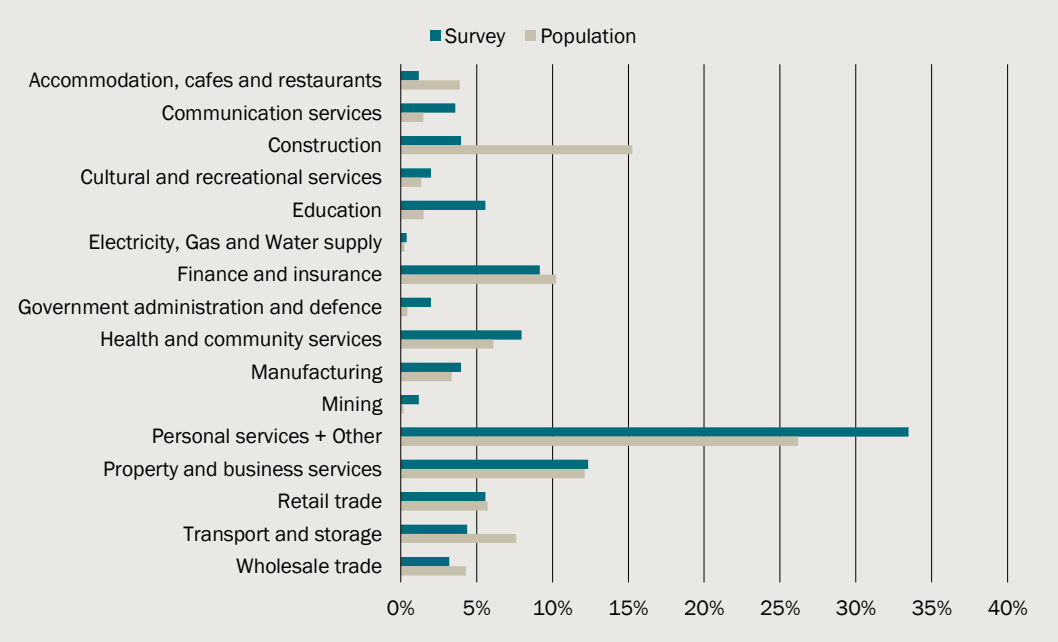
4.15 Business respondents by employment size



How many employees do you have in your business (full time equivalents other than the proprietor)?
Base all respondents (n=251)

A broad range of industries were represented in the sample (see figure 4.16). Businesses in the construction industry were underrepresented relative to the underlying population, while businesses in the 'Personal services' or 'Other' categories were overrepresented.

4.16 Business respondents by industry



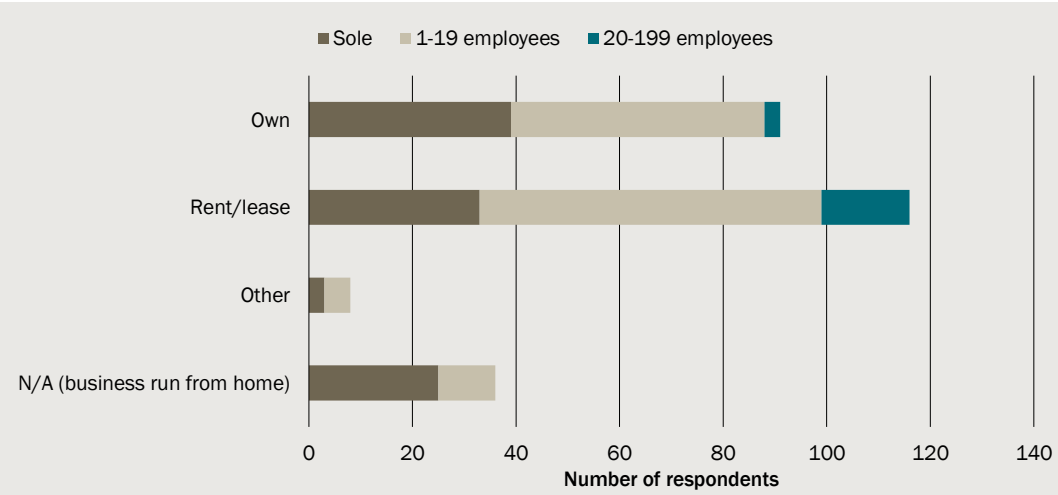
What industry does your business operate within?

Population data from ABS Cat. No. 8165, with ANZSIC industry classification corresponding to survey categories one-for-one, apart from 'Personal services + Other', which includes ANZSIC industries "Other services", "Administrative and support services", "Agriculture, forestry and fishing", "Currently unknown", and "Professional, scientific and technical services"

Base all respondents (n=251)

The sample included a mix of new and longstanding businesses, with around 60 per cent of business respondents having been in operation for more than ten years. Around 46 per cent of the sample rent or lease their business premises, with 36 per cent owning their premises and 17 per cent having another tenure arrangement or running the business from home.

4.17 Business respondents by tenure type and employment size



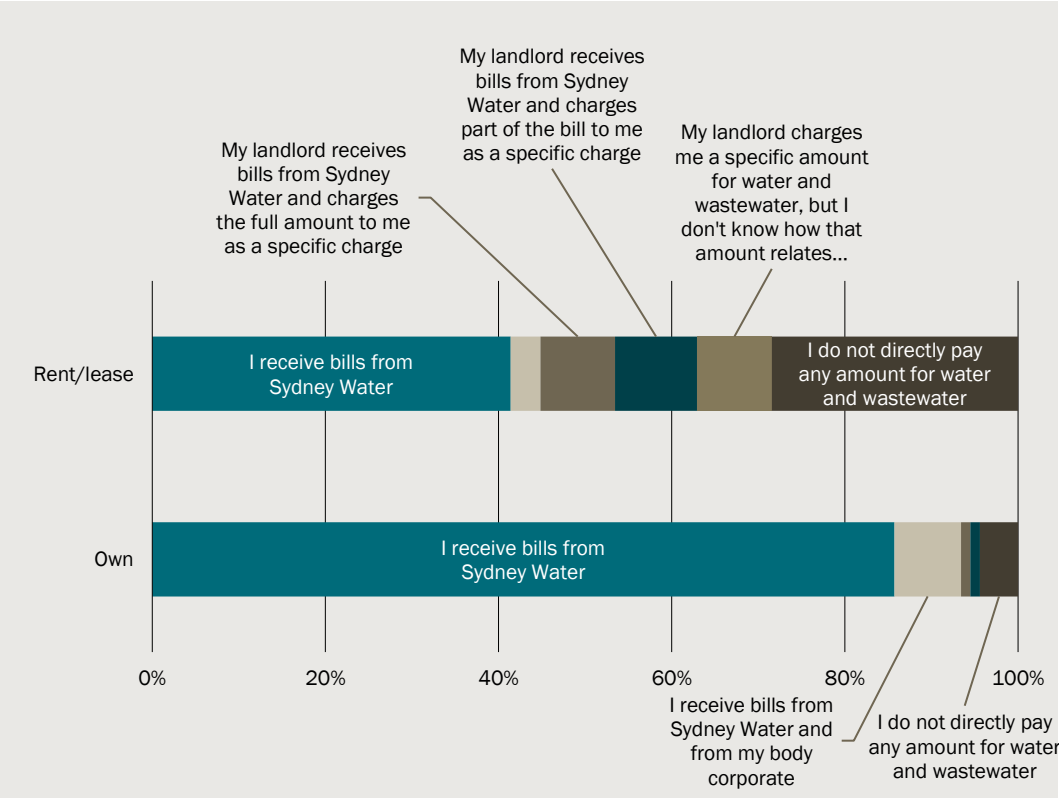
Does your business own or rent/lease its business premises?

Note: Comparison to underlying population is not provided for this chart due to unavailability of data on business tenure type

Base all respondents (n=251)

More than 90 per cent of businesses that own their premises indicated that they receive bills from Sydney Water. Some 45 per cent of businesses renting or leasing their premises also indicated they receive bills from Sydney Water. Around 9 per cent of renters have the bill passed on in full by the landlord, 9 per cent have it passed on in part and another 9 per cent have an amount passed on but they don't know how it relates to the bill. Another 28 per cent do not pay any amount towards water or wastewater.

4.18 Business premises ownership by billing arrangement



Does your business own or rent/lease its business premises? Which of the following best describes the water and wastewater bills you receive for your business?

Base all respondents (n=251)

Characteristics of the individual responding on behalf of the business included the following:

- Around two thirds of the respondents were male and around one third were female.
- Some 73 per cent of the respondents were the owner or proprietor of the business, with 20 per cent being senior management and 7 per cent being another type of employee.

5 Results: perceptions of Sydney Water

- **The vast majority of survey respondents indicated they had heard of Sydney Water (93 per cent across the citizens and business surveys), although they were aware the survey was being conducted for Sydney Water prior to answering this question.**
- **When people think of Sydney Water, they think of drinking water supply. Wastewater came to mind for only one third of citizens surveyed (and they tended to use the word 'sewerage', rather than 'wastewater').**
- **Prior to forums, just over a third of participants stated that they were likely to speak positively about Sydney Water (score 8-10 out of 10).**
- **This percentage increased considerably to 56 per cent when asked at the end of forums.**
- **Younger participants at deliberative forums were the least likely to speak positively about Sydney Water.**
- **Older and LOTE participants were the most likely to speak positively about Sydney Water.**
- **Forum participants generally thought Sydney Water provides reliable services.**
- **Few of the forum participants (16 per cent) rated Sydney Water as poor in terms of value for money, with many more (43 per cent) indicating Sydney Water represents good value for money.**

Forums

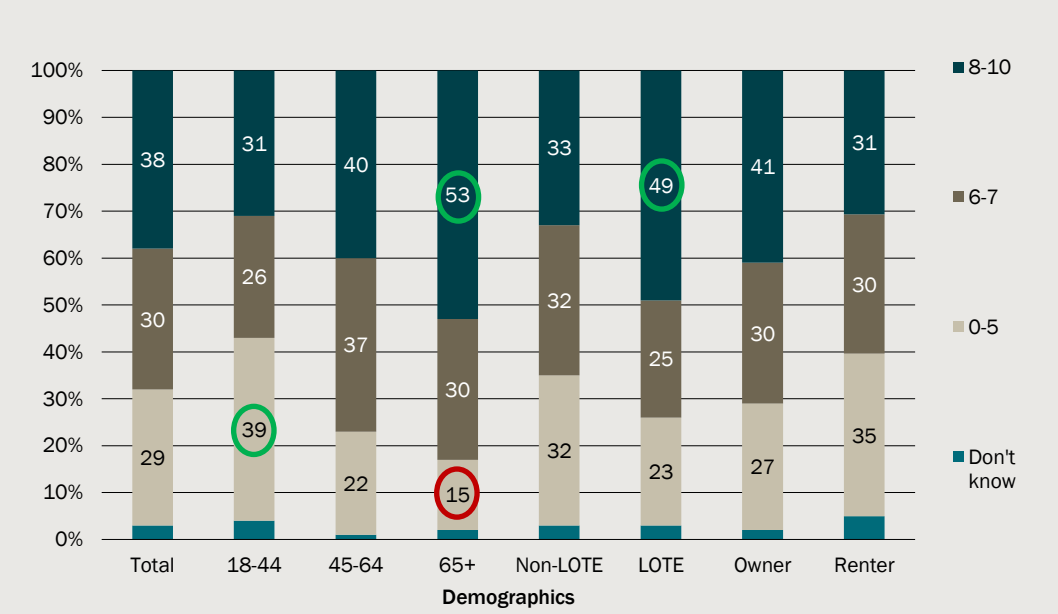
At the start of each forum, participants were asked to vote on a series of questions regarding their sentiment towards Sydney Water. Polling was done via keypads, with each participant being assigned a specific keypad throughout the event, allowing for post event analysis. The sample size for polling varied slightly across the questions (see notes below each of the figures presented in this section), with a small number of participants missing some questions, for example while making tea or coffee.

Participants were firstly asked how likely they would be to speak positively about Sydney Water to a friend or family member. Each participant gave a score out of 10, where 0 was 'not likely at all' and 10 was 'definitely likely'. This question was then repeated at the end of the forum, to see if there was an improvement across each location.

Over one third of participants (38 per cent) selected a score from 8-10 to indicate their likelihood of speaking positively about Sydney Water, with those aged 65 years or over (53 per cent) and LOTE participants (49 per cent) being more likely to give a positive

score. It is not clear why these groups were more positive about Sydney Water and this could be the subject of further research.

5.1 Likelihood to speak positively about Sydney Water to a friend or family member (pre forum)



How likely would you be to speak positively about Sydney Water to a friend or family member, where 0 is not at all likely and 10 is definitely likely?

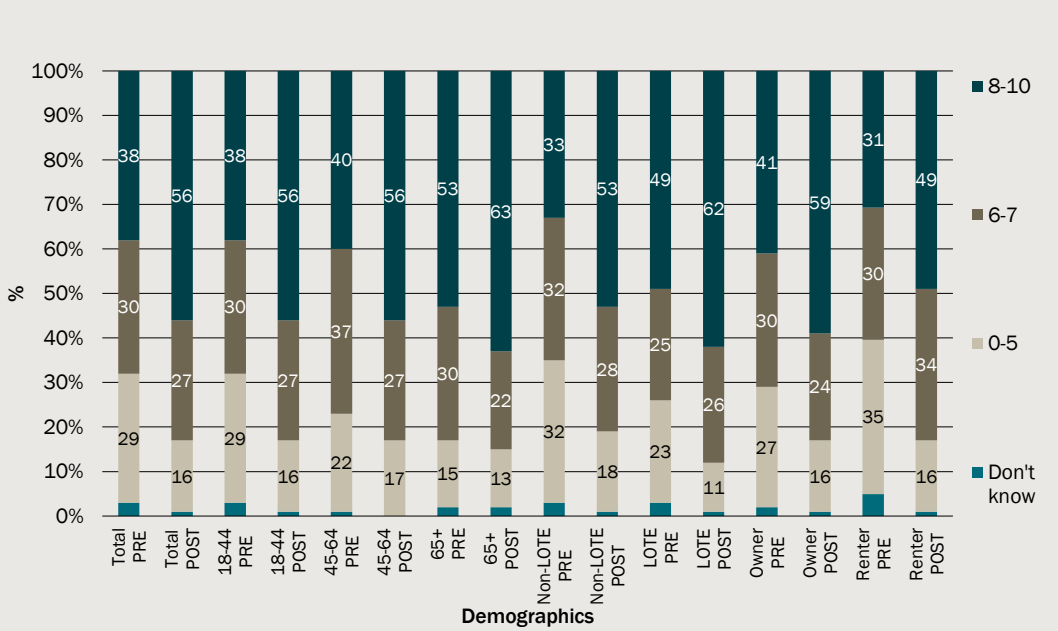
Base All respondents n=415; 18-44 (n=199), 45-64 (n=130), 65+ (n=86), Non-LOTE (n=344), LOTE (n=71), Owner (n=289), Renter (n=126)

Less than a third (29 per cent) offered only a score between 0-5 to indicate their likelihood to say positive things, with this lower level of likelihood to promote Sydney Water higher amongst younger 18-44 year olds (39 per cent).

Following the forum, participants were asked again their likelihood to say positive things about Sydney Water, and results improved across the board (see figure 5.2). The proportion of participants nominating likelihood scores of 8-10 increased from 38 per cent to 56 per cent post-forum, those nominating scores of between 0-5 decreased from 29 per cent to 16 per cent of participants. This increase in favourable responses was apparent across all segments and across all locations.

Participants were then asked to rate Sydney Water on a number of attributes on a scale of 0 to 10, where 0 was the lowest score and 10 the highest. These attributes were; 'has customer's interests at heart'; 'listens to customers'; and is 'open and honest'.

5.2 Likelihood to speak positively about Sydney Water to a friend or family member (pre and post forum)

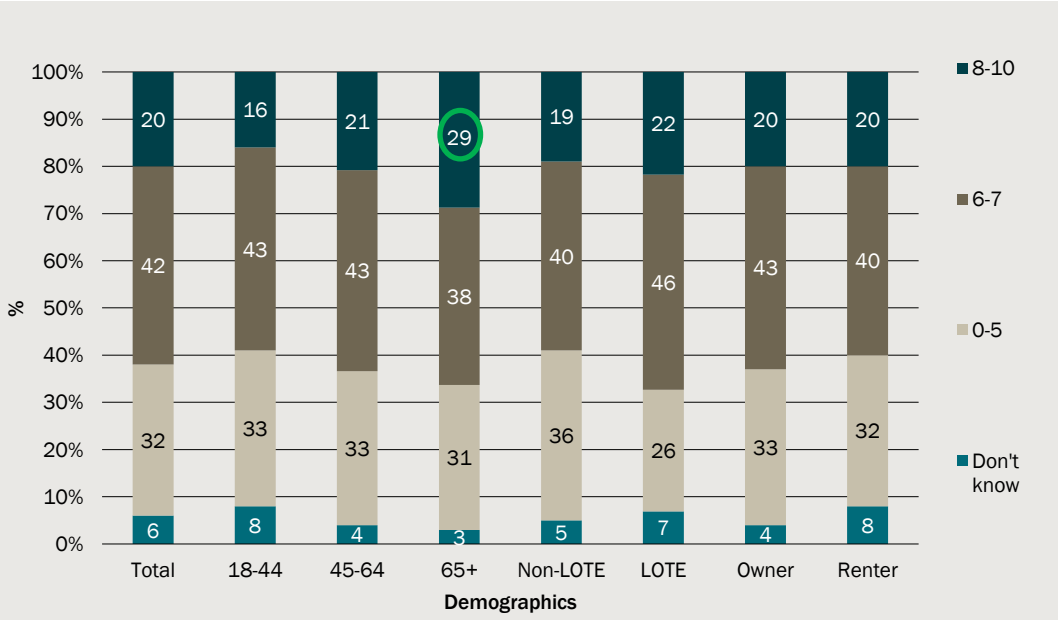


How likely would you be to speak positively about Sydney Water to a friend or family member, where 0 is not at all likely and 10 is definitely likely?

Base All respondents n=415; 18-44 (n=199), 45-64 (n=130), 65+ (n=86), Non-LOTE (n=344), LOTE (n=71), Owner (n=289), Renter (n=126)

For the attribute, 'has customers interest at heart' one in five (20 per cent) gave a score of 8, 9 or 10 out of 10 and a further 42 per cent offered a score between 6-7 out of ten. The proportion indicating a score of between 0-5 however, was 32 per cent.

5.3 Rating of Sydney Water on 'has customer interests at heart'



How would you rate Sydney Water on the following: Has customers' interests at heart

Base All respondents n=426 ; 18-44 (n=204), 45-64 (n=133), 65+ (n=89), Non-LOTE (n=352), LOTE (n=74), Owner (n=298), Renter (n=128)

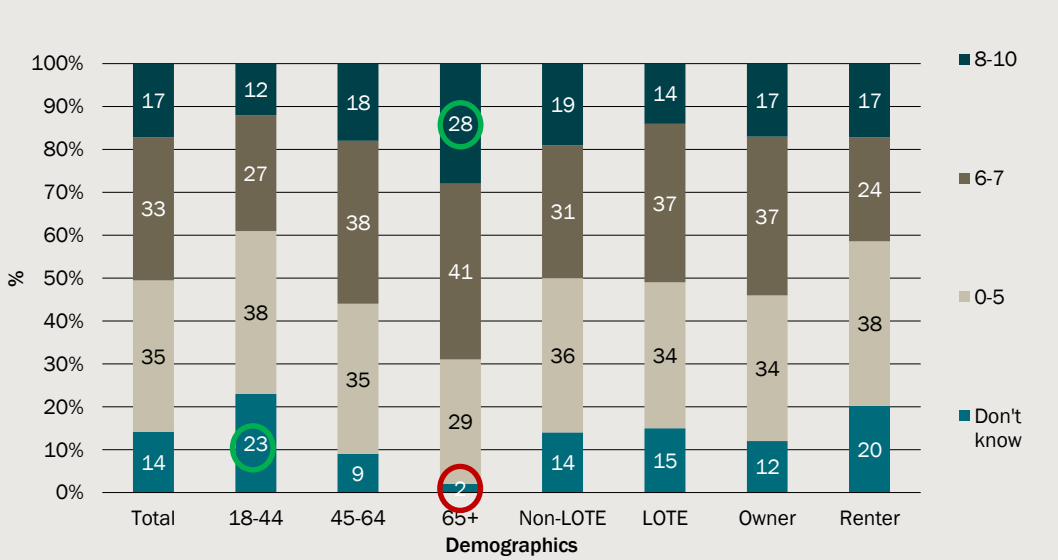
The segments that scored Sydney Water most favourably on this dimension were those over 65 years (29 per cent 8-10/10) and participants from Wollongong and surrounding regions (41 per cent 8-10/10).

The attribute 'listening to customers' was given an 8-10/10 score by 17 per cent of participants, with a further 33 per cent selecting a score of 6-7/10.

Over one in ten (14 per cent) of participants claimed that they did not know if Sydney Water listened to customers with this being particularly the case amongst those 18-44 years (23 per cent).

Again, it was those aged over 65 years that were more likely to rate Sydney Water positively in this regard.

5.4 Rating of Sydney Water on 'listens to customers'



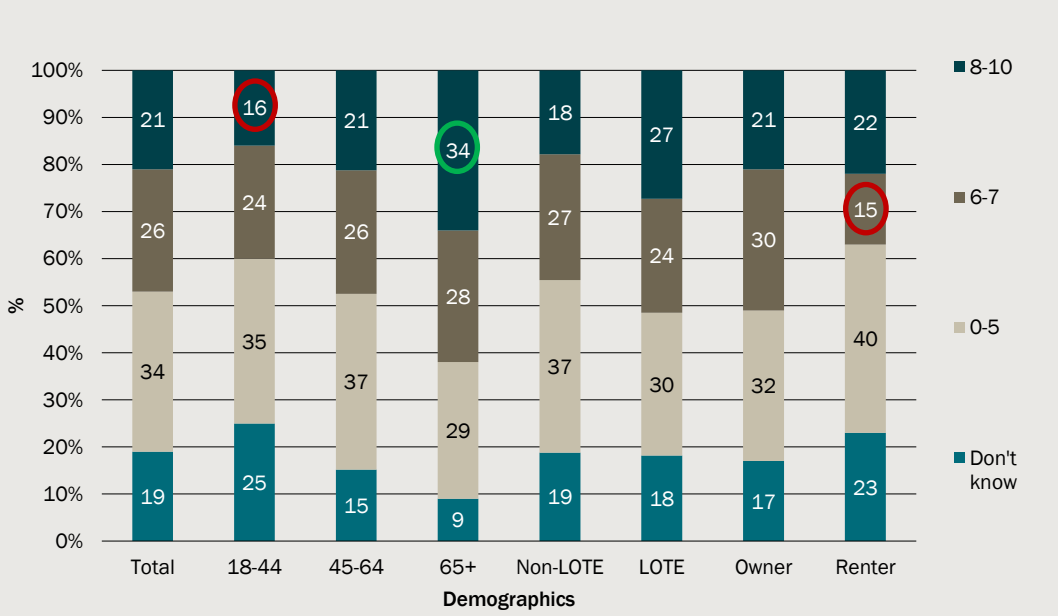
How would you rate Sydney Water on the following: Listens to customers

Base All respondents n=426; 18-44 (n=204), 45-64 (n=133), 65+ (n=89), Non-LOTE (n=352), LOTE (n=74), Owner (n=298), Renter (n=128)

The final attribute participants were asked to rate Sydney Water on was 'open and honest' (see figure 5.5). Overall, 21 per cent of those in the forums gave a score of 8-10/10, with a further 26 per cent offering a score of 6-7/10. Those most positive tended to be aged 65 years plus (34 per cent 8-10/10) and from Parramatta and surrounding regions (31 per cent 8-10/10). We note that Sydney Water's Chief Executive Officer presented at the Parramatta deliberative forum and Sydney Water's head office is located in Parramatta.

For this attribute, nearly one in five (19 per cent) participants were unable to offer a score as they felt they did not know if Sydney Water was open and honest. This was particularly the case amongst 18-44 year olds (25 per cent).

5.5 Rating of Sydney Water on 'open and honest'

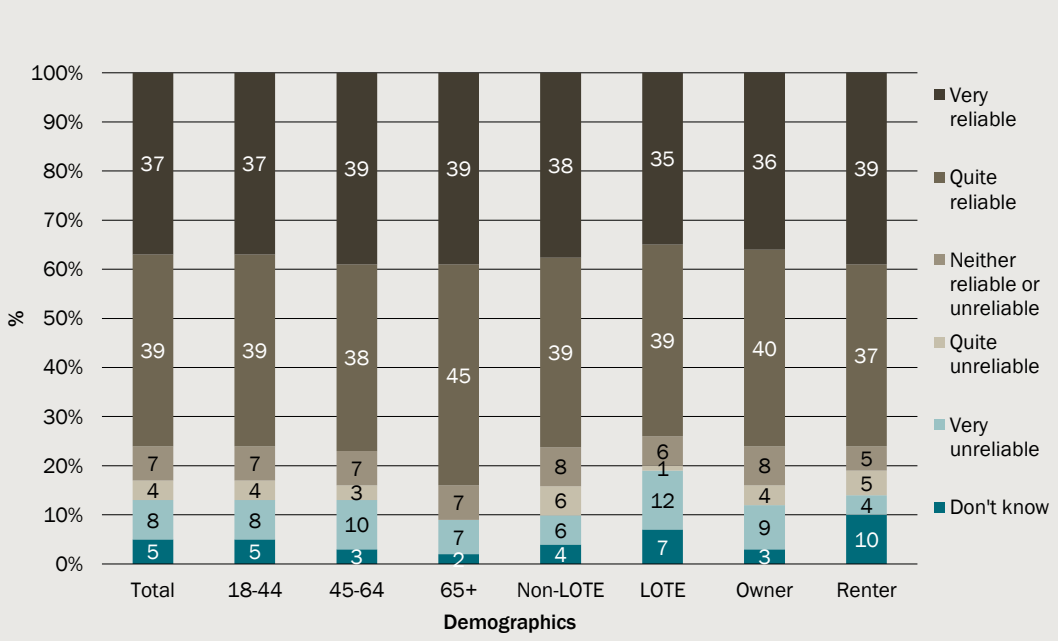


How would you rate Sydney Water on the following: Open and honest

Base All respondents n=426; 18-44 (n=204), 45-64 (n=133), 65+ (n=89), Non-LOTE (n=352), LOTE (n=74), Owner (n=298), Renter (n=128)

Following on from these questions, participants were asked prior to the start of the forum how reliable they felt their water and wastewater service is. Over three quarters (76 per cent) of participants felt that their service was reliable, with 37 per cent claiming it to be 'very' reliable, and 39 per cent 'quite' reliable.

5.6 Perceived reliability of water and wastewater services



How reliable do you think your water and wastewater service is?

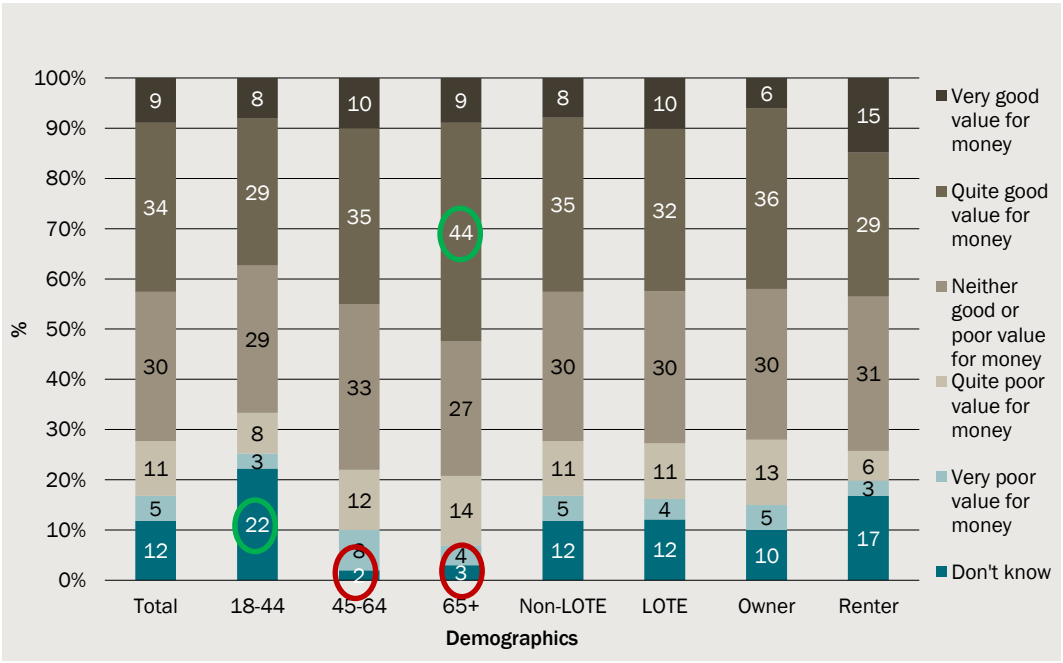
Base All respondents n=427 ; 18-44 (n=209), 45-64 (n=132), 65+ (n=86), Non-LOTE (n=349), LOTE (n=78), Owner (n=297), Renter (n=130)

There was little difference in the perceived reliability of Sydney Water by age, ethnicity or home ownership, although those within Penrith and surrounding regions were most positive (49 per cent 'very' reliable) while those in Bankstown and surrounding regions were least positive (25 per cent 'very' reliable).

Participants were also asked to indicate how they would rate their water and wastewater service in terms of value for money. While around 30 per cent selected neither good nor poor value and a further 12 per cent felt they did not know (particularly those 18-44 years 22 per cent), over four in ten (43 per cent) suggested that they felt their water and wastewater service provided 'value for money' (9 per cent very good value; 34 per cent quite good value).

The most positive response to this question came from those aged over 65 years, with over half (53 per cent) nominating that their service was 'value for money'. There were no significant differences by location.

5.7 Perceived value for money of water and wastewater service



How would you rate your water and wastewater service in terms of value for money?

Base All respondents n=419; 18-44 (n=198), 45-64 (n=134), 65+ (n=87), Non-LOTE (n=343), LOTE (n=76), Owner (n=291), Renter (n=128)

Online survey

Respondents evidenced a high level of awareness of Sydney Water, with 93 per cent of citizens and all of the businesses surveyed indicating they had heard of Sydney Water. However, this result should be interpreted with caution. The survey was not designed as an awareness survey and respondents had been told prior to answering this question that the survey was being conducted for Sydney Water.

Most respondents identified water supply as the service provided by Sydney Water. Around 35 per cent of citizens and 58 per cent of businesses also mentioned sewerage, drainage or stormwater in their description of the services provided by Sydney Water. Citizens used the words 'sewerage' or 'sewage' around six times more often than the words 'wastewater' or 'waste water'. Some 3 per cent of citizens and 2 per cent of businesses identified catchment and dam management as a service provided by Sydney Water.

6 Results: customer priorities

- **The outcomes that are most important to customers are:**
  - **Clean/fresh/safe drinking water;**
  - **Affordable/low prices; and**
  - **Reliable supply (particularly important for business customers).**
- **Other outcomes that customers value highly include:**
  - **Quick response to leaks, interruptions and overflows;**
  - **Reliable wastewater service;**
  - **Water supply security;**
  - **Protection of the natural environment; and**
  - **Good customer service and communication.**
- **Other priorities identified by smaller numbers of customers include education/water efficiency, transparency, technology/innovation, recycling/reuse and good water pressure.**
- **Discussion at forums and small groups indicated there are perceptions that Sydney Water is generally performing well with regards to quality of drinking water and reliability (minimal water interruptions).**
- **However, there is a perception that more could be done to repair leaks quickly and ensure water supply security, particularly because of the expected increase in demand by a growing population. Participants expected this would involve ensuring infrastructure is replaced or maintained, water being conserved or used efficiently, and that more recycled/grey water being used where it can be rather than drinking water.**

Forums and discussion groups

What Sydney Water is doing well

To initiate the discussion about what customers value and prioritise with regards to their water and wastewater service, participants were first asked in an unprompted manner what they thought Sydney Water does well and not so well currently.

"There is always water when you turn the tap on." Penrith

Responses were consistent across the forum locations. Sydney Water was thought to provide a reliable supply of good quality drinking water, which was taken for granted most of the time. Water in the Greater Sydney area was thought to smell and taste pretty good, particularly when compared to other areas of the country (e.g. Melbourne and Adelaide) and certainly when compared to other countries. There were thought to be a very small number of water interruptions with most people saying they could not remember ever having experienced one.

"Sydney Water is the best tasting water in Australia." CBD

"If a pipe breaks they are quick to fix it." Wollongong

Those who had had contact with Sydney Water generally mentioned that the customer service had been good. Any reported problems had generally elicited a prompt response from Sydney Water. Those who had experienced an interruption had generally been notified prior.

Some made a comparison with other utilities such as electricity and believed that Sydney Water compares favourably in terms of cost and consistency of supply. The bill was also thought to be clear and easy to understand.

The Mandarin speaking group compared water quality in Sydney with that of China and stated that Sydney's water is very good in comparison. All of the group had a very limited understanding about what Sydney Water does apart from providing clean water. They appreciated the supply of clean water and having an uninterrupted water supply. They also commented on the reasonable price and the fact that the price is largely fixed, although there was little understanding about how the water usage component is calculated.

"The water coming out of the tap is healthy than the water coming out of the filter – people don't change their filters." Wollongong

What Sydney Water is not doing as well

In terms of what Sydney Water does not do well there was less consistency. Some specific factors mentioned by a number of respondents were:

- Excessive water wastage through leaks that are not seen to be repaired promptly.
- Too much old infrastructure that is not being replaced – some believed that there was less maintenance and replacement of infrastructure now and more 'quick fixing' of problems (Band-Aid solutions) than in the past.

"Ageing infrastructure. There is not a week that goes by when a water main doesn't burst." CBD

- A lack of public awareness about the role and responsibilities of Sydney Water which led people to believe that Sydney Water were not actively educating people about this.
- Linked to this, unclear definitions of the roles and responsibilities of homeowners, Councils and Sydney Water so that when there was a problem it was sometimes hard to work out whose responsibility it was (and it did not always seem fair).

- Partially treated wastewater running into creeks and beaches (many thought that this should never happen and it should just be stormwater rather than wastewater).
- Too much fluoride and chlorine in the water, and smell, taste or colour was an issue in some locations e.g. Erskineville was mentioned.
- Not being notified when water is going to be turned off (however, this might just be for unplanned interruptions).
- Not encouraging people to use less water, e.g. some participants mentioned that the fixed charge is much higher than the usage charge which seemed to discourage water saving behaviours.
- Not encouraging the use of recycled water /more grey water.
- Inconsistencies in pressure for some.
- A minority mentioned the cost of the desalination plant and the fact that it is used so infrequently.
- Closure of offices e.g. Chatswood.

"People would be a lot more forgiving if they knew what Sydney Water does." Wollongong

"I would like to see no wastewater leave residential properties. Should be recycled." Bankstown

There was some distrust of government in the Mandarin speaking group. They described Sydney Water like all other government departments "who just tell you what to do and they would not want to explain more to you". Some participants noted that Sydney Water could do more to ensure water quality. A few months ago some participants had heard about concerns about the level of zinc in Sydney water in an online forum. As a result one participant went to the Sydney Water website to check the quality of their water and were satisfied with the information they found. Participants also raised concerns about the safety of their own water pipes and noted that while they understood that Sydney Water is not responsible for these pipes, they can impact on water quality and should be included in advice provided to customers.

"In China, the government would use some ultrasound technology to sanitize the water pipes." CALD group

In the Arabic speaking group similar issues emerged to those voiced in the community forums. Participants noted that they would like to see Sydney Water do more to collect rainwater and support householders to collect rainwater, provide support on the use of grey water and reduce overall water costs to the consumer. Some participants wanted to see Sydney Water promote the high quality of water to help reduce the use of bottled water.

The financial hardship and small to medium business groups provided similar responses to the forums regarding what Sydney Water is doing well and not so well.

Values

Participants at the forums and in the discussion groups were asked to consider the future and what they thought would make an ideal water and wastewater service provider. More specifically, participants considered what they felt the critical factors or values would be to ensure customers are satisfied.

The values that emerged across all the forums were relatively consistent, with the main themes outlined below.

Good quality clean water

Perhaps not surprisingly, having good quality clean water to drink was ranked highest in every forum. As mentioned, participants were generally satisfied with the quality and cleanliness of Sydney's water and wanted to keep it as such.

"Make sure it's got no sediment or bacteria in it." Bankstown

Safety was also mentioned within this value – ensuring that water was safe and healthy to drink. It was important to people that water should have a good taste and smell, which Sydney Water was thought to provide currently.

Participants wanted reassurance that Sydney Water conducts regular testing and monitoring to ensure consistent good-quality drinking water.

Fluoridation of water was raised within the water quality value, with acknowledgement that this is a controversial topic. Some were concerned about the potential effects of fluoride in water, whilst others believed that fluoridation is beneficial.

Some participants questioned whether all water needs to be of a drinkable standard, and suggested that water of a non-drinkable standard could be used for non-drinking purposes, resulting in more cost efficiency.

Reliability

Participants believed that the ideal water and wastewater service provider would provide a reliable service, both in terms of supplying water and removing wastewater. Some mentioned the current situation in Cape Town where the city is planning for 'Day Zero' when water supply will be switched off, highlighting what customers would want Sydney Water to avoid.

"Ensuring constant supply in the immediate term but also future proofing our supply going forwards." Chatswood

Reliability was defined by participants as water being available all the time with consistent pressure. Participants believed that the current level of reliability was good with minimal water interruptions so wanted to maintain this.

Reliability as a value was also linked to maintenance. Participants requested that Sydney Water should repair or replace pipework in the older parts of Sydney to prevent burst water mains and subsequent water supply interruptions. It was also linked to future proofing and ensuring future supply.

Affordability

Many forum participants indicated that an affordable water and wastewater service that provides good value for money was of high priority. Most thought that compared to other utilities such as electricity and gas, water costs were reasonable and that Sydney Water provided better value for money. Ensuring cost efficiency in providing the services was thought to be important as was transparency around reasons for any price rises.

"Have a safety net for financial hardship." Wollongong

Supporting those on low incomes and pensioners was also raised as a consideration in relation to affordability.

Future proofing/ensuring future supply

Participants were highly concerned about Sydney's population growth to date, and the expected growth over the next 10 years. The problems in Cape Town were mentioned by many participants as the result of an increasing population and not enough future planning. They wanted reassurance from Sydney Water that the organisation is focussed on the future and preparing for the increase in future demand. They believed this involved replacing old infrastructure, ensuring that the network is capable of withstanding increased pressure and consideration of a variety of water supply options for the future (dams, desalination, recycling).

"It is a concern that the network will have to be built up to survive the growing population." CBD

Participants had a number of questions of Sydney Water such as 'do we need to encourage the greater use of grey water to allow more targeted use of drinking water?', 'do we need more dams?', 'will the desalination plant be used more?', 'will outdated infrastructure be replaced and will there be better maintenance of the network to keep up with the added pressure of increased demand on the system?'

Future-proofing could also include ensuring that Sydney's water supply is safe from a potential terrorist attack, which was raised on some tables.

Environmentally sensitive

The environment was a key consideration for many at the forums. They wanted reassurance that Sydney Water will use natural resources judiciously and environmental impacts will be considered when managing water and wastewater services in the future. They also requested that Sydney Water is mindful of energy use during the water and wastewater treatment process.

There were mixed views about recycled water. On one hand there was strong support for water reuse for gardening and other non-drinking purposes, but on the other there was concern about recycled water being used for drinking.

"Minimising harmful impacts to the environment for water and wastewater." Bankstown

Reducing the impact of pollution on beaches was raised at most of the forums. There was concern about the safety of releasing sewage into the oceans and some even mentioned paying more to stop this practice.

"Less run off onto the beaches from sewerage plants. I would be willing to pay more to do it better." CBD

Maintenance of infrastructure

The maintenance of infrastructure was mainly related to upgrading pipes but new filtration and treatment plants were also mentioned. It was thought to be linked to reliability and future-proofing in that participants believed that improved maintenance is part of future-proofing and would lead to better reliability for the increasing population.

"Making sure that pipes are maintained to ensure constant supply." Chatswood

Participants believed that better maintenance now would lead to stable or lower prices in the future because pipes would not need fixing as much.

Education/encouraging water efficiency

Education was mentioned frequently by participants as an important value for a future water and wastewater service provider. It was thought that Sydney Water should keep educating the public on water conservation measures to encourage water efficiency. It was suggested that the information should continue to be made readily available to the community through the Sydney Water website, apps, in Waterwrap and in schools.

Participants also wanted more information about what goes into Sydney's water e.g. fluoride, and how safe and healthy it is to drink, along with where our water comes from.

"Education on where water comes from, how to reduce waste and use water more efficiently." Wollongong

Education and information was also thought to be needed about water tanks and using grey water, as well as the use of recycled water.

Some mentioned that there should be more education about the roles of different organisations with regards to fixing leaks and stormwater management, especially in defining the roles of Local Councils versus Sydney Water as this was an area of confusion.

Transparency

Transparency was an important value to many participants. This involved transparency from Sydney Water about where money is spent, how they treat the water, how they use customer data and what they are doing in relation to future proofing.

"Accountable – transparency in terms of the decisions made." CBD

Ensuring they are compliant with the law was mentioned as part of this value.

Many were not aware that Sydney Water was overseen by a regulator in relation to its pricing, and this was seen positively.

Technology/innovation/R&D

The discussion regarding this value was about making sure that Sydney Water is using the latest technologies to increase supply, save water and also around the treatment and usage of wastewater.

"Attempting to come up with smarter solutions to problems." CBD

It was thought that this value could positively impact many of the other values, for example it was thought that it could improve reliability, increase supply and even help save costs.

Good customer service

Good customer service and communication were believed to be important values for future water and wastewater service providers.

"Good customer service – responsive to questions, handling complaints, easy to deal with." Chatswood

Participants requested that when they call, Sydney Water should respond quickly and efficiently, staff should be knowledgeable, take the question/request/complaint seriously and follow it up. The ideal scenario would be to be given a call back if there is a long waiting period, to talk to a person rather than a machine (in Australia rather than overseas) and be given a job number and so your issue can be tracked in the system.

In terms of communication, participants requested prior notice of water interruptions.

Encouraging the use of recycled water/rainwater tanks

Participants often mentioned that there should be increased use of recycled water/grey water and believed that other countries are better at using both.

There was a feeling that people have a lack of knowledge about recycled water and as such are uncomfortable with the idea of drinking it. However, there was high acceptance of its use for non-drinking purposes, in particular for industries that use large volumes of water and do not need it to be of drinking quality standard.

"Have dual pipe delivery for recycled water." Penrith

Participants suggested a dual water system. Some had already experienced this with use of a purple tap for non-drinking purposes. They believed that people should be encouraged further to install rainwater tanks, particularly to water the garden, and that this should be incentivised.

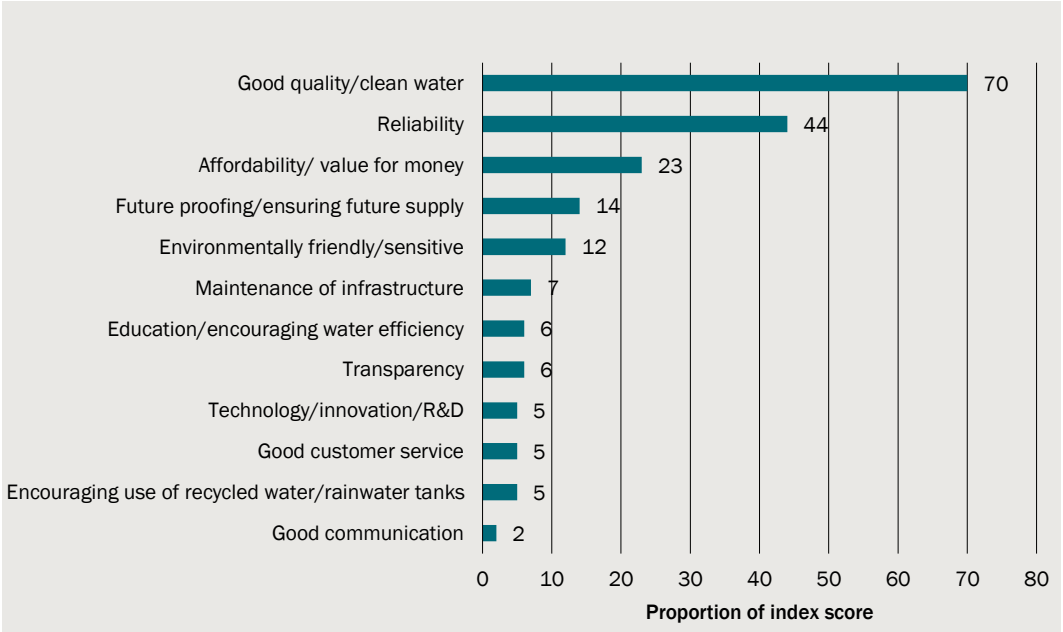
Keypad polling on top 3 priorities

The values generated by all of the tables were collated and themed into a short list. The list was then put to the participants and they were asked to select their top three, giving them a ranking of 1, 2 or 3.

Figure 6.1 shows the indexed scores for each of the most commonly identified values. Values deemed most important were given three points, second most important were given two points and third most important one point. The resulting scores were indexed so that the maximum score would be 100 (if everyone had chosen that value as most important).

Good quality clean water was identified as the most important value with an indexed score of 70, followed by reliability (44) and affordability/value for money (23). Future proofing/ensuring future supply (14) and environmentally sensitive (12) were also considered important by many.

6.1 Ideal supplier values: Ranking exercise



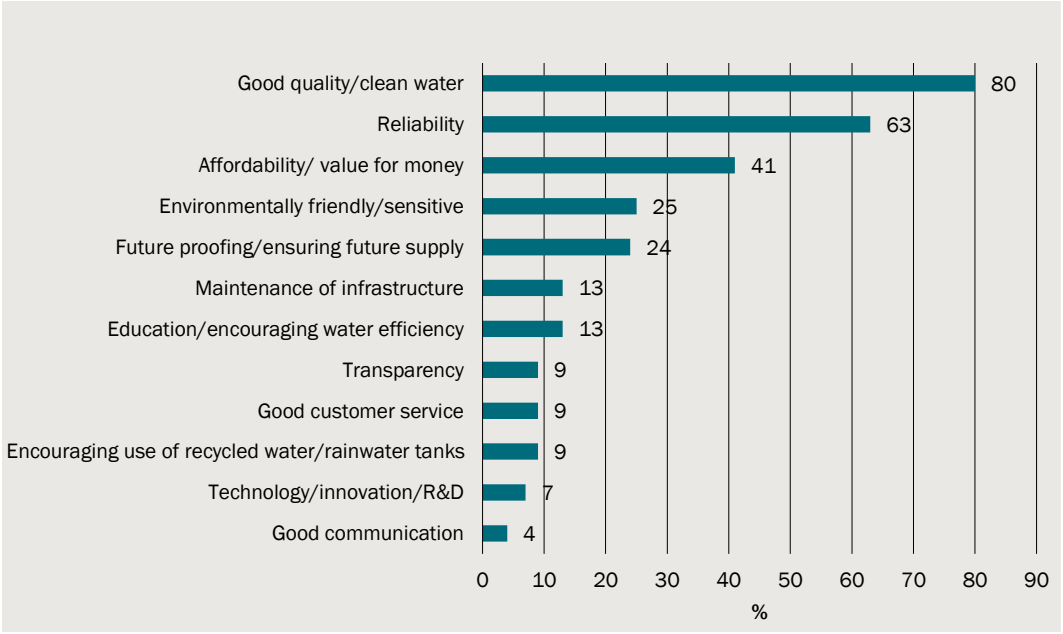
Q. Please think back to the beginning of the forum and the values that you thought were important for a water and wastewater service provider to focus on in the future. And now please choose the top three values to you in order, i.e. choose the most important one first, then the second most important one, then the third.

The index score is generated by attributing three points to a value each time it is ranked first by a participant, two points to a value each time it is ranked second, and one point to a value each time it is ranked third. Scores are then indexed so that a score of 100 equates to a value being ranked first by all participants.

Base All participants (n=467)

In terms of percentages, good quality clean water was selected as one of the top three by 80 per cent of participants, reliability by 63 per cent and affordability/value for money by 41 per cent (see figure 6.2).

6.2 Ideal supplier values: Percentage of participants selecting each value in their top three



Q. Please think back to the beginning of the forum and the values that you thought were important for a water and wastewater service provider to focus on in the future. And now please choose the top three values to you in order, i.e. choose the most important one first, then the second most important one, then the third.

Base All respondents

The top priorities for most Mandarin speaking participants in the discussion group were water quality, the reliability of the water supply and good management of wastewater. Some participants noted that they would like to see the price of water reduced. Education was also a priority in that participants wanted more information from Sydney Water on how they manage water, how water usage is measured, how water quality is determined, along with information about saving water and recycling of water. Participants noted that it was important to know how wastewater is treated and options for recycling water in their households. They were interested in initiatives that could save water, for example, they noted that in Hong Kong sea water is used to flush toilets. They were also concerned about the treatment of industrial wastewater and its impacts on the environment.

The values that arose from the Arabic discussion group were quite similar to the forums. Most participants wanted Sydney Water to provide a reliable supply of clean, safe water that is delivered through well-maintained pipes. The participants noted that good infrastructure is important for delivering a safe and reliable water supply and that this should be a key role for Sydney Water. Good wastewater management, the increased use of grey water and a focus on environmental issues were also identified as important. Other factors that were important to the group included an efficient response when a problem arises, good communication with customers and building trust between customers and service providers. Participants nominated the top three values/priorities for Sydney Water as clean, safe and reliable water supply; cheaper rates for water; and looking after environmental issues.

The financial hardship groups provided similar values too, with an emphasis on water quality, ensuring future supply, use of grey water for non-drinking purposes, cost

efficiency, affordability and incentives for use of rainwater tanks and other water saving devices.

Reliability seemed to be of slightly higher importance to the small and medium business groups due to the potential impact of water interruptions on the trade of a lot of businesses. Other key values mentioned by these groups were water quality, cost and good communication by the water supplier during incidents (as businesses rely on being provided with information that they can use to make effective decisions for their business).

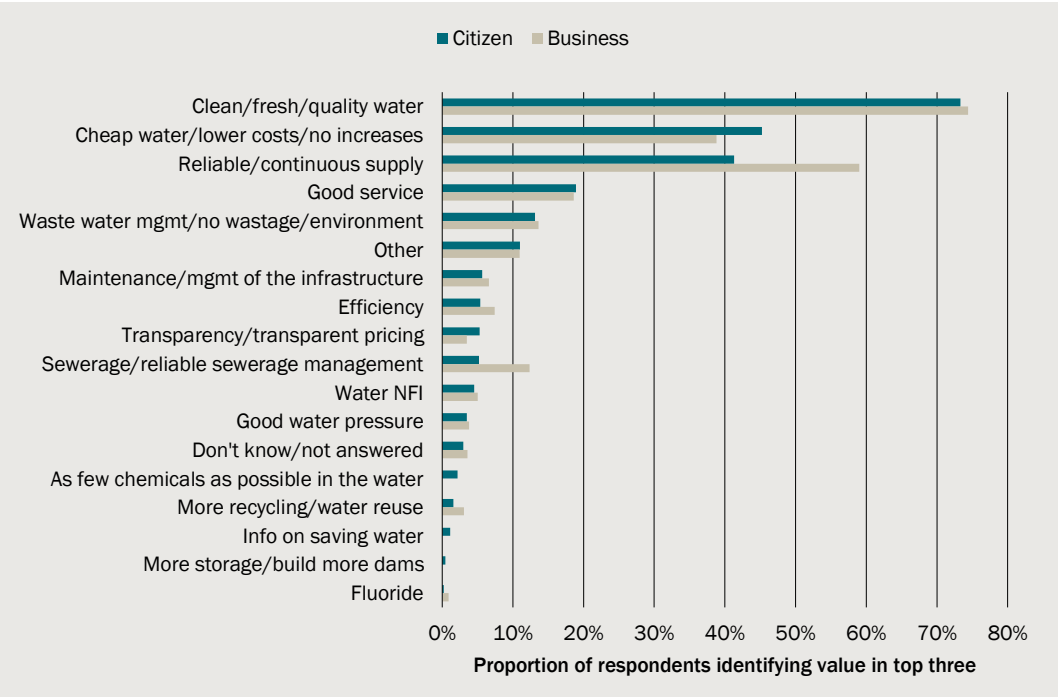
Online survey

Unprompted top three priorities

Citizens and business customers were asked in the survey questionnaire to identify the three things they want most from Sydney Water, without any prompting or examples of customer outcomes. The three broad areas that were identified most commonly by respondents were:

- water quality;
- low prices; and
- reliable supply.

6.3 Unprompted customer priorities



First of all, when you think about your water supply and wastewater services, what are the three things you want most from Sydney Water?

Note: NFI denotes 'no further information'

Base all respondents (n=1759), citizens (n=1508), businesses (n=251), citizen results reweighted for age and language

Relative to citizens, businesses placed greater emphasis on reliable supply and less emphasis on low prices. Businesses were also more likely to mention wastewater or wastewater reliability (and they typically used the word 'sewerage' rather than 'wastewater').

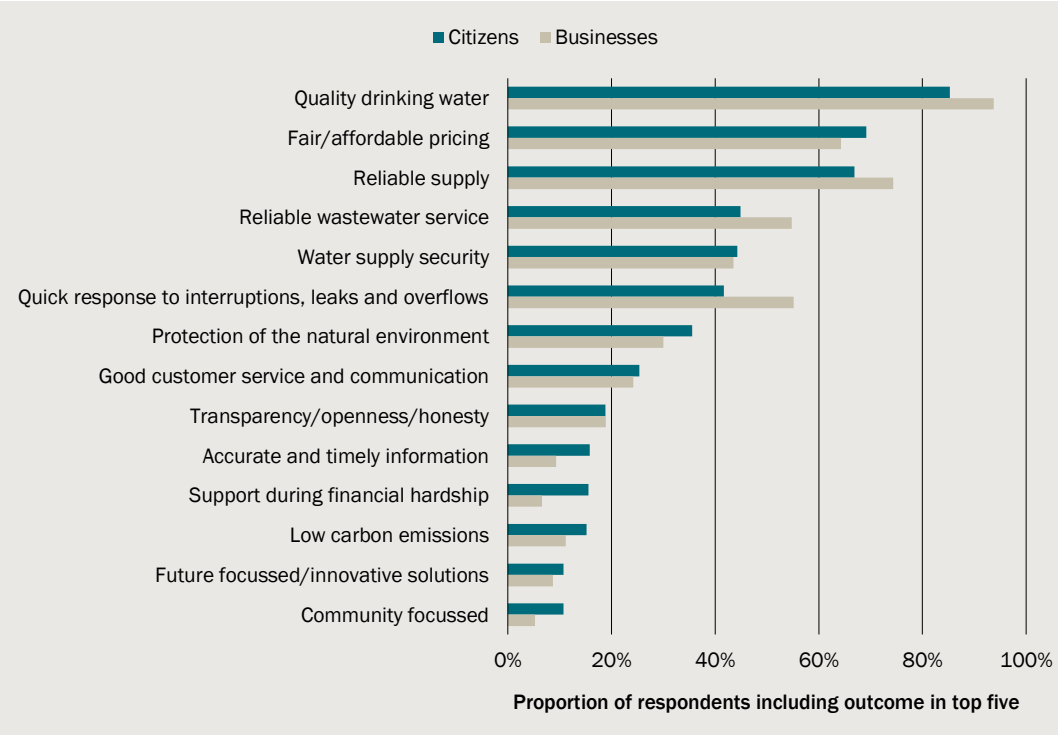
The most commonly identified priorities outside of the top three included wastewater management/no wastage/environment, good service, and wastewater/reliable wastewater management. The meaning is not always clear from the open text responses; for example, 'efficiency' could mean water use efficiency or cost efficiency and 'good service' could mean customer contact or network reliability. For this reason, it is important to confirm customer views using the prompted question discussed below.

Prompted top five priorities

Following the unprompted question about the things respondents want most from Sydney Water, survey respondents were prompted with a list of 14 outcomes and asked to choose the five outcomes that are most important to them. Consistent with the unprompted responses, the most common responses from both citizens and businesses were:

- quality drinking water;
- fair/affordable pricing; and
- reliable supply.

6.4 Prompted customer priorities



Please indicate the five outcomes that are most important to you personally.

Base all respondents (n=1759); citizens (n=1508), businesses (n=251), citizen results reweighted for age and language

Again, businesses placed greater emphasis on reliable supply and less emphasis on low prices, relative to citizens.

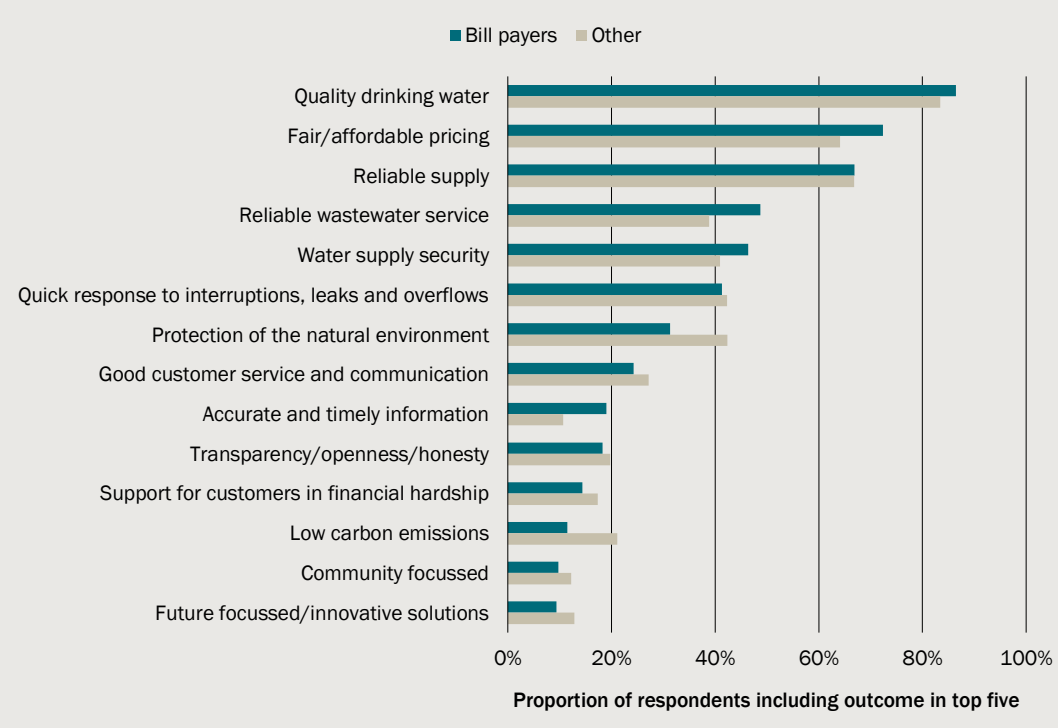
Of the remaining outcomes, the next most commonly identified were:

- reliable wastewater service;
- water supply security; and
- quick response to leaks, interruptions and overflows.

Businesses were more likely than citizens to identify wastewater reliability and quick response to leaks, interruptions and overflows in their top five outcomes. Citizens were more likely than businesses to identify protection of the environment, accurate and timely information, support during financial hardship, and community focus in their top five outcomes.

Priorities were similar when comparing citizens paying Sydney Water bills with other citizens. Bill payers, understandably, were more likely to select 'fair/affordable pricing' in their top five priorities. Citizens not paying bills direct to Sydney Water appear to place a higher priority on environmental outcomes (both 'protection of the natural environment' and 'low carbon emissions').

6.5 Prompted customer priorities by billing arrangement



Please indicate the five outcomes that are most important to you personally.

Base all citizens (n=1508); bill payers (n=971), other (n=537), results reweighted for age and language

Comparing customer priorities across the forums and surveys

The purpose of asking customers their top values and most important outcomes across multiple engagement activities and methods was to build a picture of customer priorities that could not be biased by a particular research design. The results of the forum discussion and subsequent polling, the survey unprompted priorities, and the survey prompted priorities were remarkably consistent. The top three values/outcomes were the same across the three methods and second-tier priorities, such as water security and environmental protection, were also consistent. There were no marked differences. At first glance, it would seem that pricing was ranked lower by forum participants, relative to survey respondents. However, on closer inspection, this is likely to be a product of the fact that water reliability, wastewater reliability and quick response times were separate items in the survey (and polling for reliability was spread across these items), but rolled into one item – reliability – in the forum polling.

7 Results: measuring service performance

- **The inconvenience of water interruptions varies dramatically depending on time of day and the amount of notice given.**
  - **Water interruptions during the night with notice are one of the least inconvenient events.**
  - **Lengthy water interruptions during the day or evening without notice are one of the most inconvenient events (particularly for business customers).**
- **Letter and SMS were the preferred methods of notification among forum and small group participants, with some customers identifying a letter (a week before) with an SMS reminder as the ideal arrangement.**
- **Survey respondents indicated they are highly averse to wastewater overflows, but water pressure failures and awaiting resolution of phone enquiries tend to be significantly less inconvenient than water interruption and wastewater overflow events.**
- **Forum participants indicated they would be 'much more unhappy' about repeat events, compared to one-off events, particularly in relation to wastewater overflows. However, survey participants did not indicate that repeat events would be more inconvenient than one-off events.**
- **Shorter response times are not always in customers' interests, with forum and small group participants preferring a deferred response in some circumstances so that the water supply interruption and associated noise take place at a more convenient time of day.**
- **For citizens participating in forums and small groups, the most convenient time for a water interruption is generally between 9am and 3pm. Preferences vary with respect to the least convenient time, but it is generally before 9am or after 6pm.**
- **For businesses participating in small groups, the most convenient time for a water interruption is typically late at night, while the least convenient time varies depending on their hours of operation.**
- **Communication during a water interruption is more important than restoring supply quickly, with most forum and small group participants preferring a four-hour interruption with communication to a two-hour interruption without communication.**

Forums and discussion groups

Within the forums, participants were provided with information regarding Sydney Water's requirement to meet standards in a broad range of areas. In particular, Sydney Water mentioned the minimum standards for water pressure failures, loss of water to properties with no notice (for certain durations) and wastewater overflows onto properties. These standards were explained only in brief to avoid leading participants and to ensure the discussions among participants focused on the aspects of service that matter most to them.

Reactions to service performance standards

When asked if these current standards reflected what is important to customers, and their fit with the values reported on earlier, most agreed that these were reasonable areas for Sydney Water to have standards to be met.

"These seem like the right standards for them to be measured on" - Chatswood

Given that supply of water to homes was critical, it seemed to make sense that there would be standards to ensure that customers received a reliable and consistent supply. That is, few to no interruptions and wastewater overflow events, particularly internal wastewater overflow events. Having a standard applied to water pressure was felt to be the least important of the three as technically customers would still be receiving water, just not at the correct pressure.

The presentation from Sydney Water was not specific in terms of the number of incidences or breaches they were allowed to have within the standards, and what the penalties were so it was difficult for customers to comment further.

The other service standard performance measures participants felt should be included were standards for:

- customer service issues, such as how much notice customers receive for planned outages;
- response times to unplanned events;
- water quality;
- future-proofing supply; and
- quality/maintenance of infrastructure.

"They are complementary to each other. When there are no water problems, the enquiries to the customer services will be relatively less." CALD group

The Mandarin speaking discussion group saw ensuring water pressure, limiting water interruptions and water overflow events as more important than customer service, while others noted that they are complementary services in that if there are more water interruptions then it is more important that customer service is good, if there are fewer interruptions then there will be less calls to customer service.

In the Arabic speaking group most participants thought that water quality and ensuring reliable supply were the key elements that Sydney Water should be measured on. Some participants also thought that customer service was very important and that it complements successful water delivery services.

Experience and levels of inconvenience

Overall, few participants in the forums and groups reported having experienced a water interruption, low pressure or a wastewater overflow event. The few that had experienced an event tended to report that it was only a few hours and that the response and communication from Sydney Water had been good.

"I have to give them an A+ for service. Twice I have had a letter of notification. You can make provisions"- CBD

In fact, quite a number had never experienced a water event and felt that Sydney Water was excellent in this regard.

"I have never had an interruption in the 51 years I have lived in this house"- Penrith

There were one or two participants in each forum that cited instances where service had been quite poor, along with some in the LOTE in-language groups.

When asked what types of events they believed would be most inconvenient, everyone agreed that a wastewater overflow event would present the worst scenario, particularly if it was an internal overflow.

There were obvious concerns over the smell and unpleasant nature of wastewater overflows, however participants also raised health concerns and felt that they would be worried about young children and pets playing in dirty water in the yard or on the street. Others mentioned the possibility of damage to the property and the need to clean up the residue once the blockage is fixed.

"It would be gross, and would require cleaning-up, a water outage is inconvenient but wouldn't have as much of an impact" - Chatswood

"We had a four hour water interruption and no notice. I had to call to find out what was happening. It would have been nice for them to be proactive!" - Penrith

Having water supply turned off was seen to be inconvenient however, as long as people were given adequate notice, it was felt that the household could get themselves prepared to lessen the impact.

Most participants suggested that a water pressure problem would be the least inconvenient of the events, however there was some agreement that a persistent water pressure problem would become extremely aggravating.

"If you have a persistent problem with low pressure then that is bad, barely a trickle out of your shower" - Penrith

Inconvenience of events by time of day

There was almost unanimous agreement across forums and discussion groups that the most inconvenient time for a water interruption would be in the morning when trying to get children to school or get ready for work. The second worst time would be in the evening during dinner time.

"The morning would be the worst time as you potentially have a lot of people in the house wanting to get ready." - Chatswood

However, there was recognition that some people may work shifts where a non-peak time would be more inconvenient for them and in that sense, the most inconvenient time for a water interruption would probably differ by household.

"It depends who you are, families have different requirements to a shift worker, never make everyone happy"- Wollongong

Small and medium businesses thought that the peak hours for their business would be the most inconvenient, however these hours varied depending on the business. The level of inconvenience also varied depending on the type of business.

There was a great deal of discussion in the forums and groups regarding whether Sydney Water needed to start fixing a problem straight away or delay fixing it to reduce the inconvenience to customers. Most participants suggested that a lot depended on the severity of the event, the time of day it happened, and the length of time it would take to fix.

Some participants argued that it was preferable to fix the problem straight away to minimise damage to properties and the wasting of water in the case of something like a burst pipe. Others believed that it would be better to communicate the problem quickly to customers and let them have a short period to prepare themselves, but still try and resolve the problem as soon as they could.

"Depends on the severity of the water event. If it is a loss of pressure then you can wait" - CBD

"There should be a model applied of risk vs reward as to whether it is more beneficial to fix it immediately or wait a little bit." - Bankstown

Further discussion suggested that if there was no threat of damage or water wastage, then holding off until the middle of the day would be preferable.

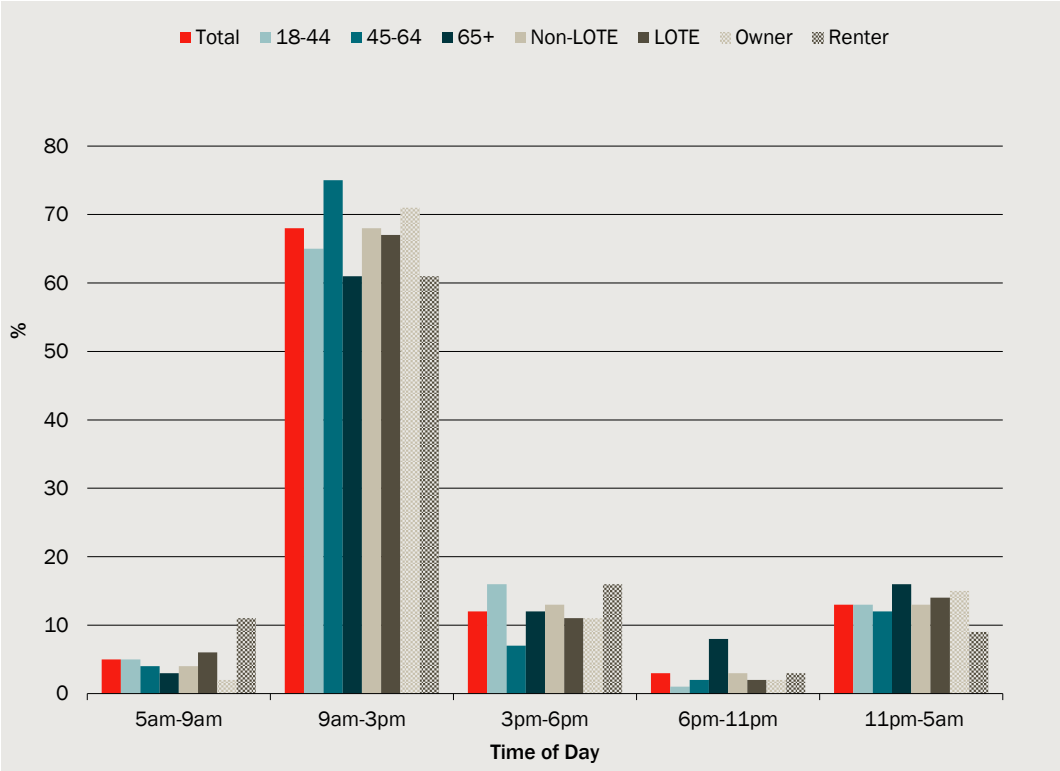
Many participants began discussing that the situation for Sydney Water would be one of a cost-benefit analysis where they would need to weigh up the cost of fixing it immediately and the inconvenience to customers as well as the potential property damage and loss of water.

There was an assumption that sending repairers out in the middle of the night would be

"If it was a burst water pipe and it's going to flood your yard, you would want it fixed straight away." - Penrith

costly for Sydney Water and if the repairs could wait, it would certainly be better for all concerned.

7.1 Best time for a three-hour water interruption



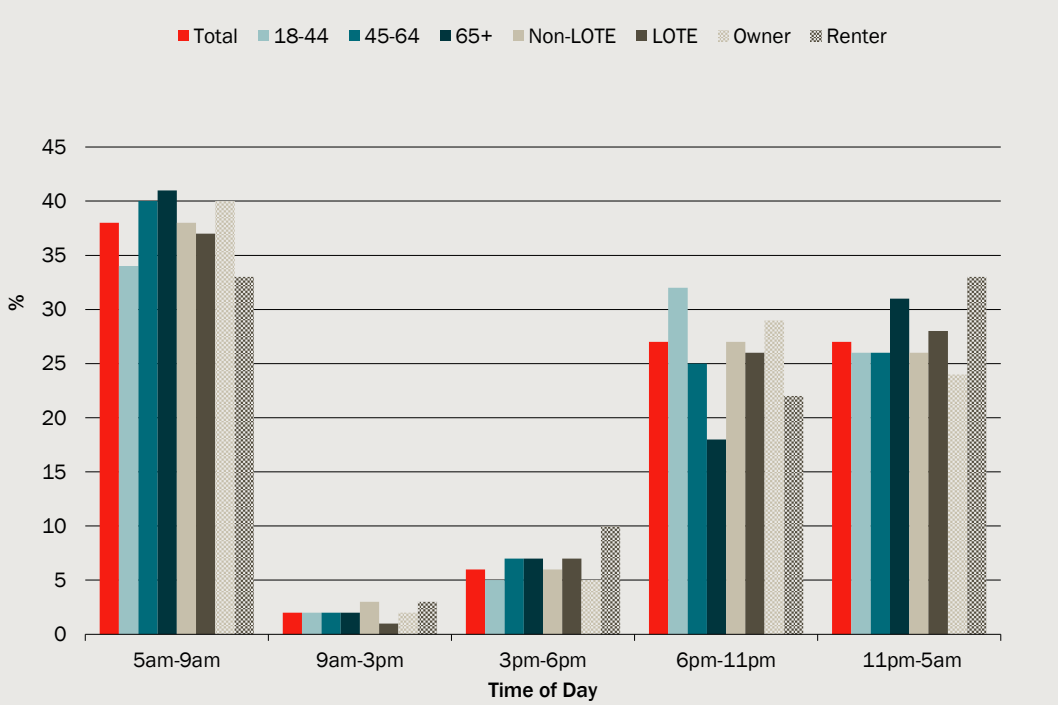
What would be the best time on a weekday for a three-hour water interruption in your household? Fixing the interruption would involve diggers and trucks making noise in your street.

Base All respondents n=398; 18-44 (n=194), 45-64 (n=130), 65+ (n=74), Non-LOTE (n=334), LOTE (n=64), Owner (n=274), Renter (n=124)

When specifically asked within the forums what the best time would be for a three-hour water interruption in the household, the majority agreed that the most convenient time would be 9am to 3pm on a weekday (68 per cent). There were no marked differences between participants in terms of ethnicity or home owners versus renters, although those over 65 years plus were more likely to nominate the middle of the night (11pm to 5am) as being the best time (15 per cent), whilst those 45-64 years were the most likely to prefer the middle of the day (9am-3pm) (75 per cent).

Interestingly, those from Wollongong and surrounding regions were more likely to claim that the 9am-3pm time slot was the best time for an interruption (80 per cent), whilst those living in Bankstown and surrounding regions were the least likely to nominate that time (48 per cent), with these residents being more likely to choose 11pm-5am (20 per cent).

7.2 Worst time for a three-hour water interruption



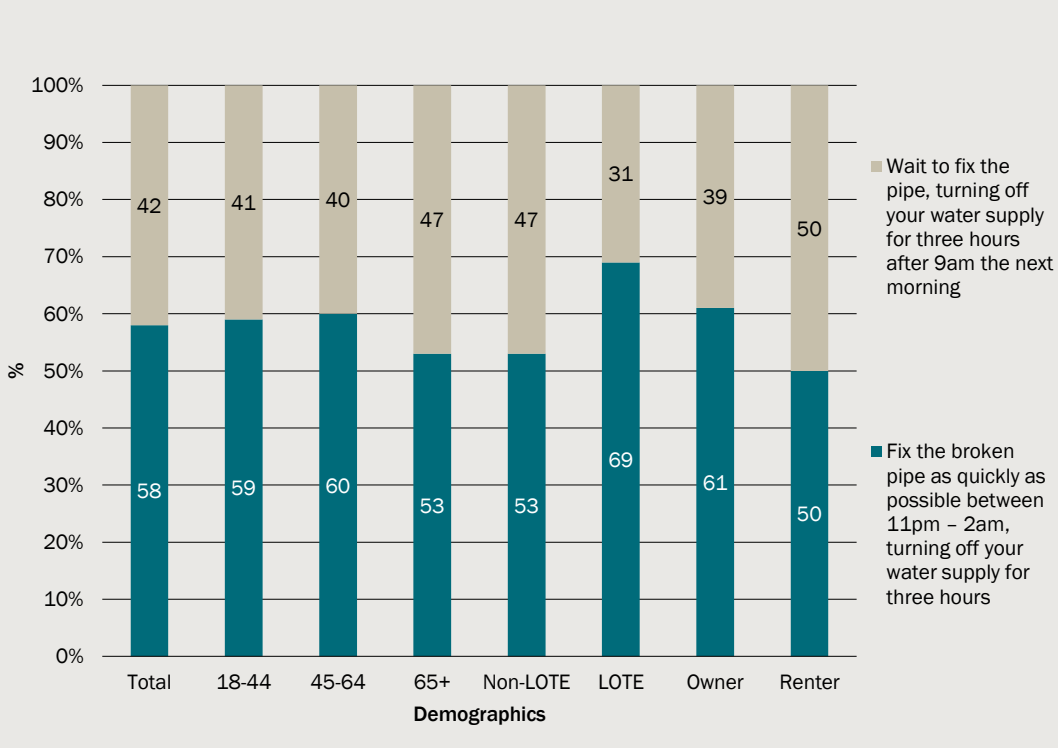
What would be the worst time on a weekday for a three-hour water interruption in your household? Fixing the interruption would involve diggers and trucks making noise in your street.

Base All respondents n=398; 18-44 (n=194), 45-64 (n=130), 65+ (n=74), Non-LOTE (n=334), LOTE (n=64), Owner (n=274), Renter (n=124)

Not surprisingly, when asked what the worst time would be during the week for a water interruption, forum participants nominated either 5am-9am in the morning (38 per cent), or after 6pm (27 per cent 6pm -11pm; 27 per cent 11pm-5am).

In terms of location, those in Chatswood and surrounding regions were much more likely to agree that 5am to 9am was the worst time for a three-hour interruption (54 per cent), whilst Wollongong forum participants were more likely to nominate the 6pm-11pm time slot (36 per cent).

7.3 Night time water pipe burst scenario



A water pipe breaks during the night. Your water supply is still on, but there is water running down your street. There is no risk to safety, property or water quality. Fixing the pipe means workers, diggers and trucks making noise in your street. Would you prefer Sydney Water to:

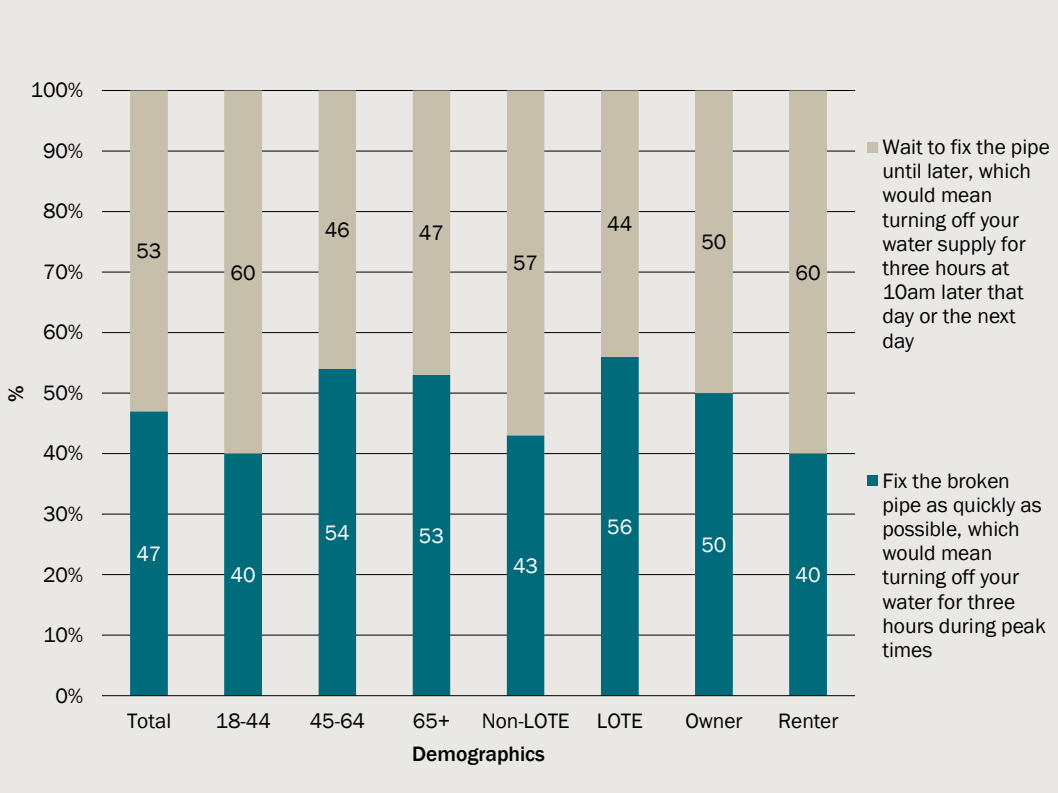
Base All respondents n=442 ; 18-44 (n=206), 45-64 (n=140), 65+ (n=96), Non-LOTE (n=366), LOTE (n=76), Owner (n=310), Renter (n=132)

Within the forums, LOTE and financial hardship groups a scenario was put forward in which a water pipe had broken in the night, but the water supply was still on. The question posed to participants was 'given there was no risk to safety, property or water quality, when would they prefer Sydney Water to fix the broken pipe that is, either immediately between 11pm and 2am which would mean the water would be turned off for three hours and there would be trucks and diggers making noise in the street, or leave it till the morning after 9am?'

Views were divided as to the best time to fix the pipe under this scenario, with participants weighing up the waste of water against potentially higher costs for Sydney Water working at night and noise from the works. At the forums in the keypad polling there was a leaning toward fixing the pipe immediately (58 per cent), particularly amongst the LOTE community (69 per cent) and home owners (61 per cent).

Those from the CBD forum were the least likely to want the problem fixed straight away, with 59 per cent of participants claiming that they would prefer to wait to fix the pipe the next day.

7.4 Peak time water burst scenario



If the same scenario happened as above but the water pipe breaks at 7am or 7pm (i.e. peak time). Would you prefer Sydney Water to:

Base All respondents n=446; 18-44 (n=208), 45-64 (n=142), 65+ (n=96), Non-LOTE (n=366), LOTE (n=80), Owner (n=314), Renter (n=132)

A second scenario was offered to participants that described the water pipe breaking at a peak time such as 7am or 7pm. The question was again put to participants regarding their preferred time for it to be repaired. The options were to wait to fix the pipe until later, which would mean turning off the water supply for three hours at 10am later day or the next day, or fix the broken pipe as quickly as possible, during the peak time.

There were mixed responses again, with more than half (53 per cent) suggesting that it would be better to wait to fix the problem. This was particularly the case amongst the 18-44 year old participants (60 per cent) and renters (60 per cent). It was also the more common preference among those in the Chatswood (71 per cent) and CBD (70 per cent) forums. Those in Penrith were more likely to say that the pipe should be fixed straight away (68 per cent).

"Waiting for three hours seems like a long time, I don't want that much water wasted." - Chatswood

In the discussions, those in favour of fixing it immediately felt that three hours in a peak period was a long time to wait in what they described as a chaotic time and moreover, many were worried about the waste of water.

For the participants who preferred to wait, there was a feeling that if there was no risks or damage to property, they could perhaps then send out a notification so people can be prepared before they turn off the water. For those with children and who had to get to

"It is critical to get your kids to school." - Chatswood

work, a water interruption of three hours during peak times was considered extremely inconvenient.

Small and medium business customers (in discussion groups) were presented with an alternative scenario to citizens. They were presented with a scenario where a water pipe breaks at 9am. The water supply is still on but there is water running down the street. There is no risk to safety, property or water quality. Fixing the pipe means workers, diggers and trucks in the street and might mean reduced access to the business. They were asked if they would prefer Sydney Water to fix the broken pipe as quickly as possible, turning off the business's water supply for three hours between 10am-1pm or wait to fix it turning off the supply after business hours (after 5pm that day). Interestingly the participants mainly preferred option one, fixing the pipe as quickly as possible. This was because many of the businesses either operated in the evening (e.g. restaurants, after school care) so were less affected by interruption between 10am-1pm, did not have customers or suppliers visiting their business during the day so access was not an issue or thought they could plan around it.

"It comes down to how much water is being wasted. If it is gushing then ASAP, bit if it is a small leak maybe we can wait" - Parramatta

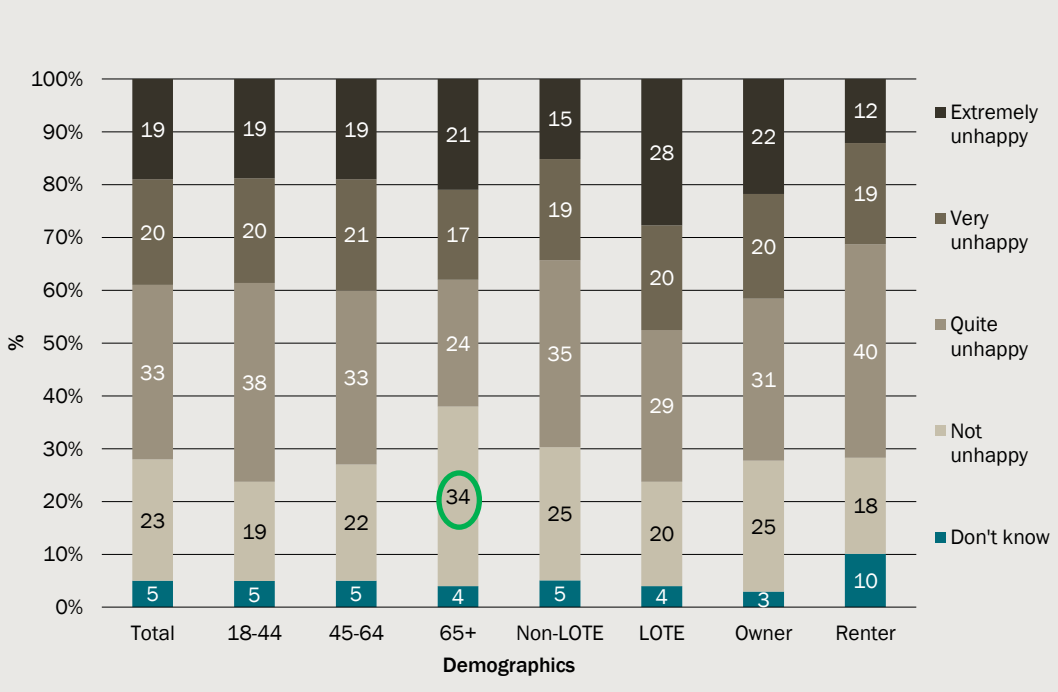
The other question put to businesses was that the same scenario occurred but it was during the night and would they prefer the pipe to be fixed during the night or at 10am the following day. Given this scenario they all said they would prefer it to be fixed during the night as this had little to no impact on the business.

"It comes back to giving notice, even if it is ten minutes you can fill a bucket or the bath" – Wollongong

Citizens were asked how they would feel if water interruptions occurred multiple times. Most residents, suggested they would be quite understanding the first time, but on the second and third time they would be extremely annoyed and presume that Sydney Water had not fixed the problem properly the first time.

In the keypad polling, a specific scenario was put forward that described a situation where residents were suddenly without water for three hours during peak time and they had not been notified of the interruption as Sydney Water were making emergency repairs (see figure 7.5). If this was to occur, most participants suggested that they would be unhappy, with 19 per cent extremely unhappy, 20 per cent very unhappy and 33 per cent quite unhappy. Almost one quarter (23 per cent) indicated that they would not be unhappy, especially those over 65 years of age (34 per cent) and participants within the Penrith forum (42 per cent).

7.5 Perceived inconvenience for an unplanned three-hour interruption at peak time



You are at home and suddenly you are without water for three hours during peak time. You had not been notified of the interruption as Sydney Water are making emergency repairs. How do you feel about Sydney Water:

Base All respondents n=448; 18-44 (n=209), 45-64 (n=142), 65+ (n=97), Non-LOTE (n=367), LOTE (n=81), Owner (n=318), Renter (n=130)

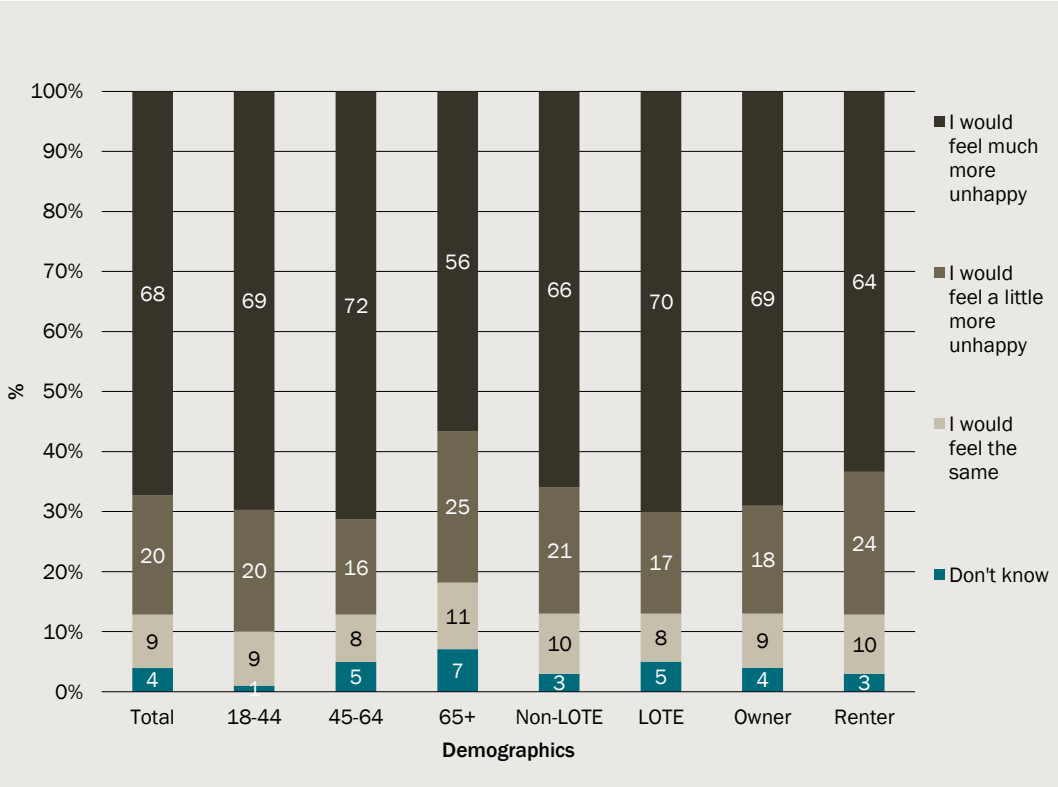
N.B. In the Penrith forum the scale was 7-point, from 'extremely unhappy' to 'extremely happy'. All 'happy' responses have been grouped into 'not unhappy'

Interestingly, when participants in the forums were faced with a scenario where this same event occurred three times over the course of a year, 68 per cent claimed they would be 'much more unhappy' the third time compared to the first time and 20 per cent indicated they would feel 'a little more unhappy' (see figure 7.6).

Those more tolerant of the situation were again the over 65 year olds where only 56 per cent claimed they would feel 'much more unhappy', and 25 per cent indicated that they would be 'a little more unhappy'.

There were no significant differences by location, other than those within Bankstown, Parramatta and their respective surrounding areas were more likely to indicate that they would be 'much more unhappy' (73 per cent respectively).

7.6 Perceived inconvenience for unplanned three-hour interruption recurring three times/year



If this same event happened to you three times in the one year, how would you feel the third time it happened compared to the first time

Base All respondents n=449 ; 18-44 (n=213), 45-64 (n=141), 65+ (n=95), Non-LOTE (n=371), LOTE (n=78), Owner (n=318), Renter (n=131)

Perceived inconvenience of a wastewater overflow

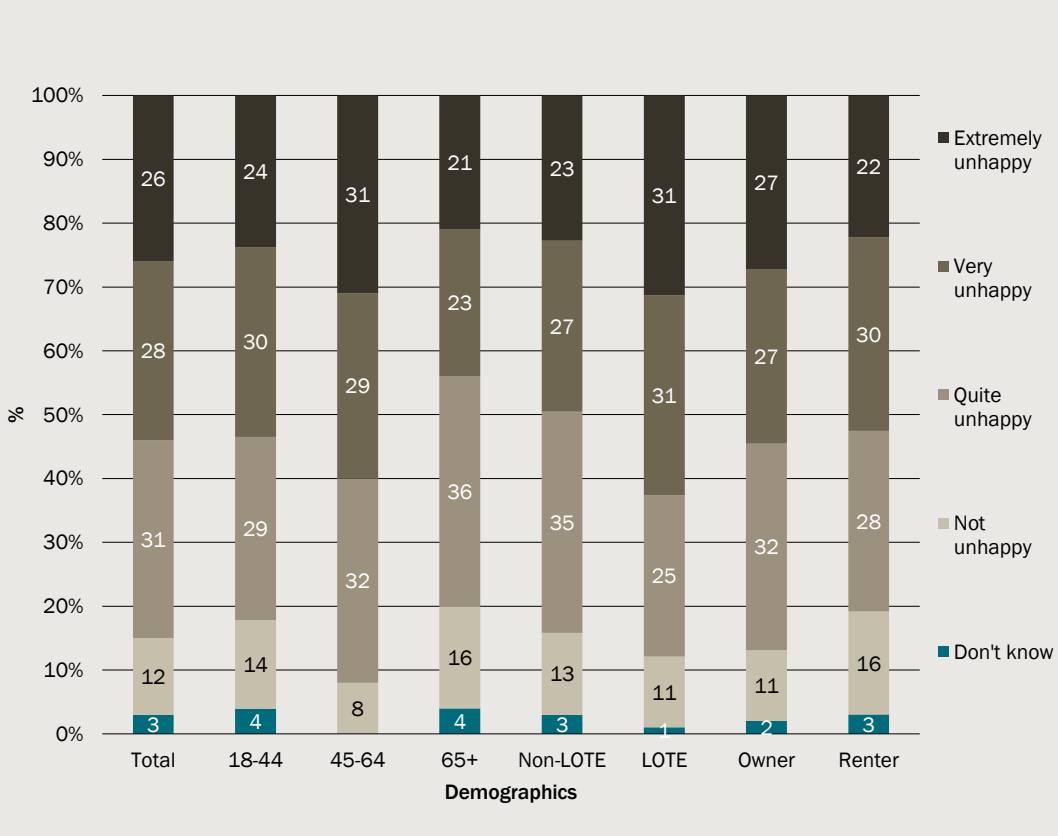
As alluded to earlier, the notion of a wastewater overflow had the potential to inconvenience customers more than a water interruption depending upon the location and extent of the overflow. It was thought to be particularly distressing for business customers where the impact would not only be felt by the business but also the customers of the business.

Participants in the forums and group discussions worried that the water flowing out onto, say, their driveway, could be contaminated and potentially a health risk for children.

There was also the concern over having to clean up the residue once the issue that caused the overflow had been fixed.

In the keypad polling section in the forums, participants were asked how they would feel if suddenly there was a wastewater overflow onto their garden or driveway caused by a blockage in Sydney Water's system.

7.7 Perceived inconvenience for a wastewater overflow



You have a wastewater overflow onto your garden or driveway caused by a blockage in Sydney Water's system. How do you feel about Sydney Water?

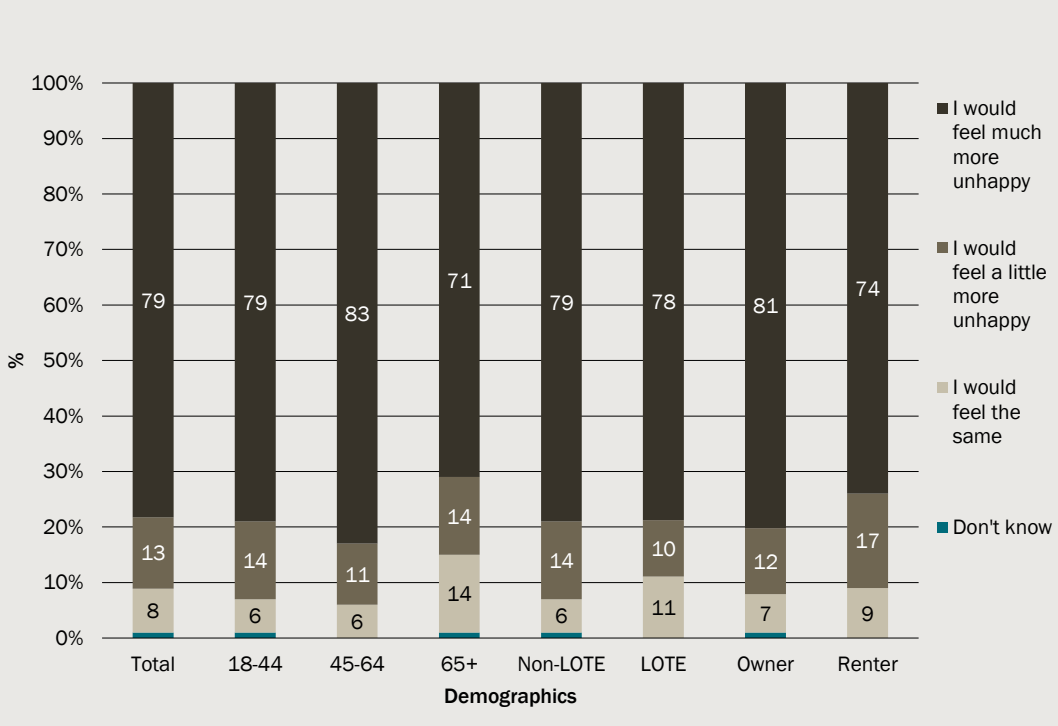
Base All respondents n=442 ; 18-44 (n=203), 45-64 (n=143), 65+ (n=96), Non-LOTE (n=363), LOTE (n=79), Owner (n=315), Renter (n=127)

N.B. In the Penrith forum the scale was 7-point, from 'extremely unhappy' to 'extremely happy'. All 'happy' responses have been grouped into 'not unhappy'

In the case of a wastewater overflow onto their garden or garage, over eighty percent (85 per cent) of forum participants claimed that they would be unhappy, with 26 per cent extremely unhappy, 28 per cent very unhappy, and 31 per cent quite unhappy.

Those in the 45-64 years age group (31 per cent extremely unhappy) and LOTE participants (31 per cent extremely unhappy) were the most upset with this situation, as were those in the Bankstown forum (42 per cent extremely unhappy).

7.8 Perceived inconvenience for wastewater overflow recurring 3 times/year



If this same event happened to you three times in the one year, how would you feel the third time it happened compared to the first time

Base All respondents n=453; 18-44 (n=212), 45-64 (n=142), 65+ (n=99), Non-LOTE (n=371), LOTE (n=82), Owner (n=320), Renter (n=133)

When the idea of this event happening three times in the same year was put forward, 79 per cent of forum participants claimed they would be 'much more unhappy' and only 13 per cent 'a little more unhappy'. There were no significant differences by age or ethnicity however, participants from Bankstown and surrounding regions (84 per cent 'much more unhappy') and Parramatta and surrounding regions (85 per cent 'much more unhappy') were more likely to be upset.

Ideal communication and notice period

Within the forums and group discussions, there was a strong preference for Sydney Water to communicate with the public, whether it be a planned or unplanned incident. Communication and keeping members of the public informed was perceived to be an effective way to curb any bad feelings towards the Sydney Water brand.

In regard to planned incidents, it was preferred that as much notice was given as possible. However, giving notice 'too far out' from the interruption event would mean that residents would need to be reminded closer to the event. The preferred amount of time was between 4-7 days, with the suggestion that a reminder text be sent 24 hours beforehand. The key factor was enabling sufficient time to plan, especially for shift workers, parents with young children, businesses and for

"Knowing when it will be fixed allows you to plan your day properly" - Bankstown

anyone that may be dependent on access to water for medical conditions or other reasons.

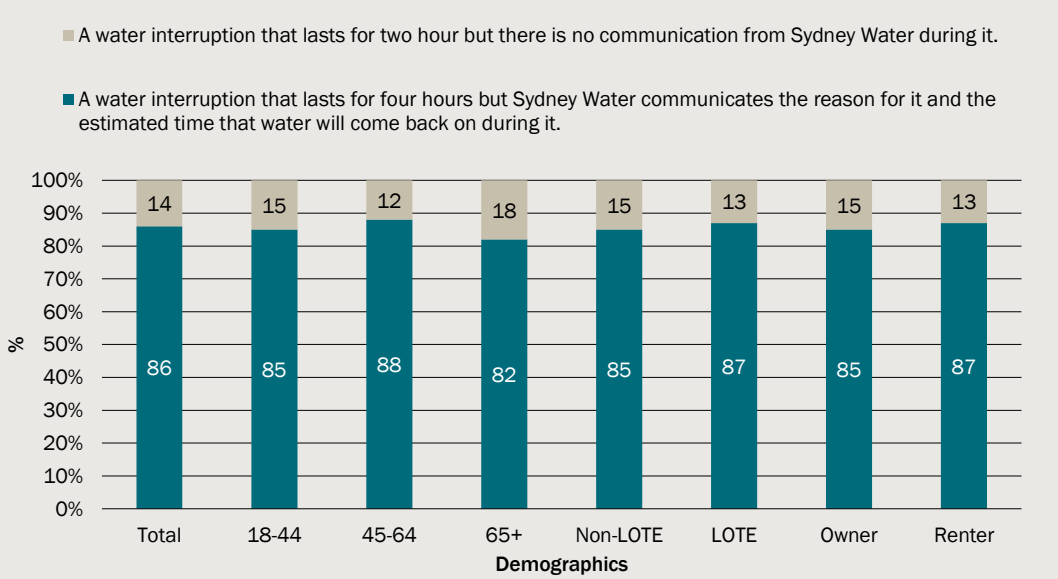
> *"[During an emergency] they could send a text message to everyone in the certain range of a tower - like they do for bushfires" - Parramatta*

In the event of an unplanned interruption, it was felt that communication channels should be readily set up to enable the public to access specific information about what was happening, as well as an estimated time frame for when the incident would be rectified (i.e. through their website, phone or an app). It was even suggested that a 10-minute notice period could be given before an unplanned interruption via text message, so that those in the area could potentially work around any short-term issues.

During the keypad polling at the forums, participants were specifically asked which they would prefer out of two possible scenarios. They could choose between a water interruption that lasts for two hours but there is no communication from Sydney Water during it, or a water interruption that lasts for four hours but Sydney Water communicates the reason for it and the estimated time that water will come back on during it.

The vast majority of participants indicated they would be prepared to trade off communication against the time of the outage, with 86 per cent selecting the four-hour outage over the two-hour on the basis that they would be communicated to.

7.9 Preference for level of communication versus length of outage



Which of the following daytime events would you prefer?

- *A water interruption that lasts for four hours but Sydney Water communicates the reason for it and the estimated time that water will come back on during it.*
- *A water interruption that lasts for two hour but there is no communication from Sydney Water during it.*

Base All respondents n=455 ; 18-44 (n=212), 45-64 (n=143), 65+ (n=100), Non-LOTE (n=372), LOTE (n=83), Owner (n=323), Renter (n=132)

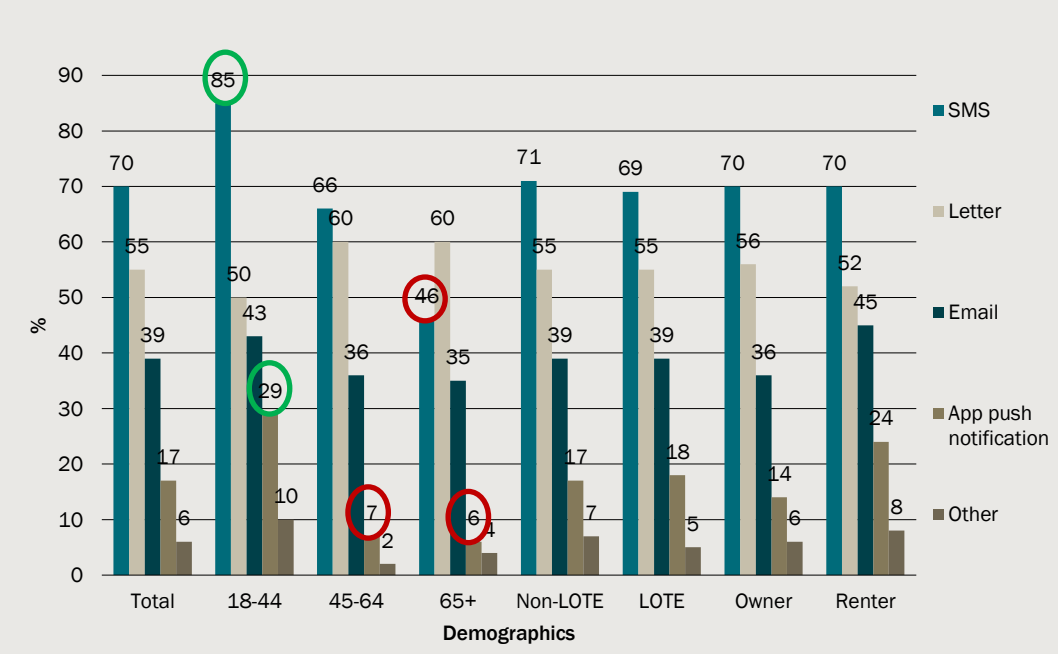
There were no significant differences by age, ethnicity or home ownership in this regard, although there was a very marginal difference by location where CBD forum participants were more likely to opt for the two-hour interruption without communication (22 per cent versus 14 per cent of the total).

Those in the discussion groups also preferred the longer duration of interruption with communication by Sydney Water. Although water interruptions were particularly problematic to business customers, they still preferred the longer interruption with communication by Sydney Water than the shorter interruption. To them, the communication meant being able to plan around the interruption and inform customers, which was seen as critical.

"There is less anxiety when you know what's going on. Otherwise you don't know what to tell customers" – SME customer

Overall, while many participants preferred direct communication via text message or email, there were still some that wanted to receive notice of a planned interruption through the post. This was most likely to be preferred by older respondents, and it was also recognised by younger demographics that this method could not be phased out completely as not all members of the public had access to a mobile phone. The keypad polling reflected this sentiment (see figure 7.10 below). There was, however, some opposition to letter box drops, as many felt it would get 'lost' in amongst various other 'junk', with many younger participants indicating they rarely even checked their mailbox.

7.10 Preferred communication for notice of planned interruption



How would you most like to be given notice of a planned water interruption?

Base All respondents n=370 ; 18-44 (n=167), 45-64 (n=117), 65+ (n=86), Non-LOTE (n=309), LOTE (n=61), Owner (n=263), Renter (n=107)

Those in Wollongong preferred a letter as a means of communication (72 per cent) rather than an email (20 per cent). Those in Bankstown (42 per cent) and Chatswood (48 per cent) were least likely to prefer a letter.

It was felt that the time of the planned interruption did not influence the method of communication, however, the method of communication did affect the perceived notice period needed. For example, receiving a letter was thought to need more lead time (1-2 weeks) as opposed to a text message, which could be used in a more timely manner (approximately three days' notice).

Business customers stated that they would like as much notice as possible for a planned interruption. They wanted at least a week, preferably two, regardless of the time of day of the interruption or the duration. To them, planning around it was crucial so the more time provided the better. They also requested that notice is provided via a number of different channels to ensure receipt, but particularly SMS if possible.

Customer service

Providing good customer service was felt to be extremely important and covered many aspects.

Participants discussed the importance of good telephone service, citing elements such as:

- answering quickly or at least saying how long you need to wait;
- offering a call back service in the case of lengthy queues;
- having knowledgeable staff that are easy to understand;
- helpful staff that can address your queries;
- staff that are willing to listen to your problems;
- staff that are in Sydney and know the area; and
- 24/7 access to information regarding outages.

A good, accessible, easy-to-navigate website was also mentioned by participants. Many suggested that the website ideally needed up-to-date information on events, what they are, where they are, how long they will be, and the timing of any planned outages.

Participants also suggested to have a page on the website that offered water saving tips, how to save money on your water bill, and information on current water levels in the dams. Others also suggested including information to educate people about the water quality and to compare Sydney Water's drinking water with other places.

The need for a Sydney Water app was mentioned by some to access outage information and water saving tips.

Participants also called for Sydney Water to be proactive, pushing information to customers either via email, SMS, phone or in the mail. Some suggested social media, more often Facebook as a means of communicating information and depending on the nature of the information, many participants suggested door knocking.

In fact, communication was felt to be key to offering good customer service. Any communication needed to be timely, offered via multiple channels, and relevant.

There was a strong desire for any problems customers experienced to be attended to immediately and resolved as fast as possible.

Business customers suggested similar requirements as residents with more weight being given to speaking to a person rather than having automated responses, having a 24/7 service and Sydney Water being proactive and informing business customers about issues as a priority rather than waiting for them to get in touch.

The Mandarin speaking group wanted to see a wide choice of communication channels, including by phone, online, and through mobile phone apps. Most participants reported that they would like to be able to communicate and receive information in their first language as people who speak limited English would prefer to be able to choose their home language to communicate with Sydney Water.

"It would also be helpful for the seniors to call Sydney Water in their own language when water problems occurred" – CALD group

Online survey

In the best-worst scaling exercise, the balanced design of questions across respondents means that inconvenience can be ranked using a best-worst score equal to:

$$\frac{(No.\,of\ times\ event\ chosen\ as\ \boldsymbol{best} - No.\,of\ times\ event\ chosen\ as\ \boldsymbol{worst})}{No.\,of\ times\ event\ \boldsymbol{presented}\ as\ an\ option}$$

The lower the score, the more inconvenient is the event for customers. Scores can range from -1 to +1, where -1 indicates the event was chosen as worst on every occasion in which it was presented to respondents and +1 indicates the event was chosen as best on every occasion.

Scores for relatively small subsamples need to be interpreted with caution, since the design may not be balanced for subgroups; that is, a given event may appear more frequently in questions with wastewater overflows than it appears in questions with water pressure failures.

The best-worst data has not been reweighted to adjust for under-sampling of younger and LOTE customers, since it is more important to maintain balance in the number of times each event is presented and the number of times a given event appears with each other event.

Citizens

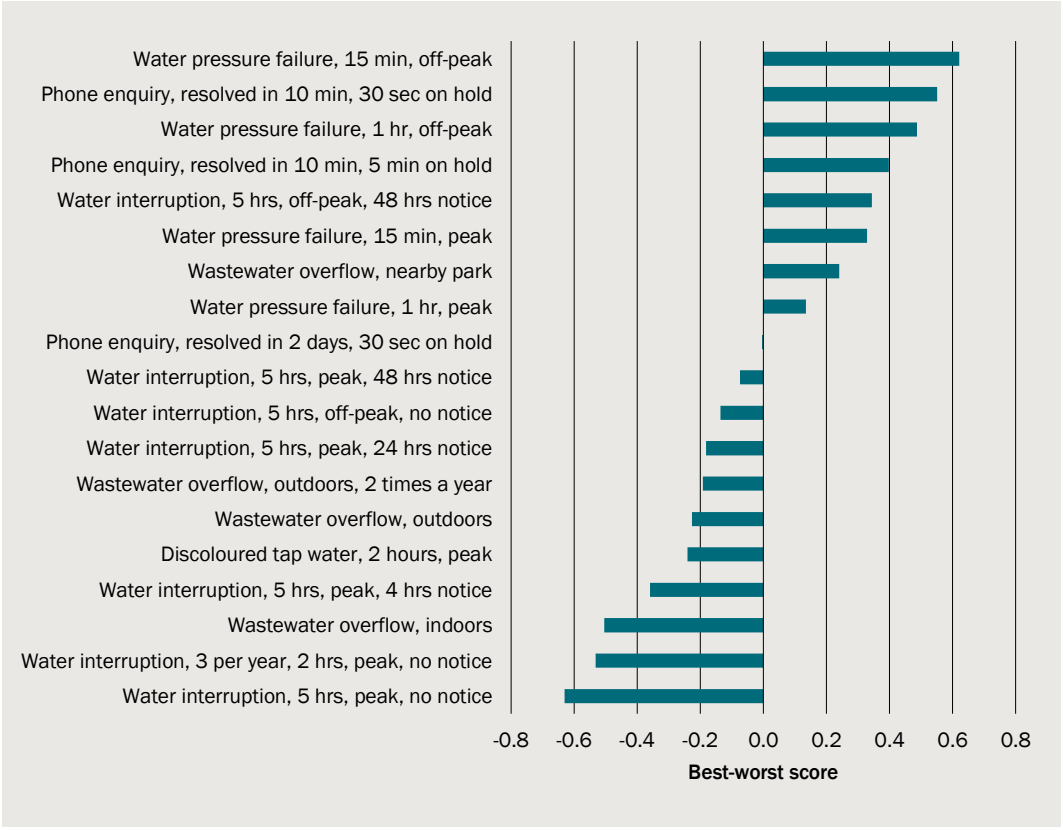
The results of the best-worst scaling exercise indicate that respondents generally gave the questions careful consideration. The ranking of variants within a given type of event are generally internally consistent and in most cases accords with a priori expectations. For example, events with longer duration are ranked as more inconvenient. One-hour water pressure failures are ranked as more inconvenient than 15-minute failures and phone

enquiries with a five-minute wait are ranked as more inconvenient than phone enquiries with a 30-second wait.

Some of the key results from the best-worst scores for citizens are:

- Water pressure failures and phone enquiries are the least inconvenient events.
- Wastewater overflows on the customer property and discoloured tap water are among the most inconvenient events.
- The inconvenience of water interruptions varies dramatically depending on the time of day it occurs and the amount of notice given. This is highlighted by the fact that:
  - a long water interruption during peak times without notice was found to be the most inconvenient of all the events presented to respondents; whereas
  - an interruption occurring during the night with advance notice is among the least inconvenient events.
- When making phone enquiries, customers prefer to remain on the phone longer and have their issue resolved, than to have their issue taken on notice and resolved in two days.

7.11 Relative inconvenience – all citizens



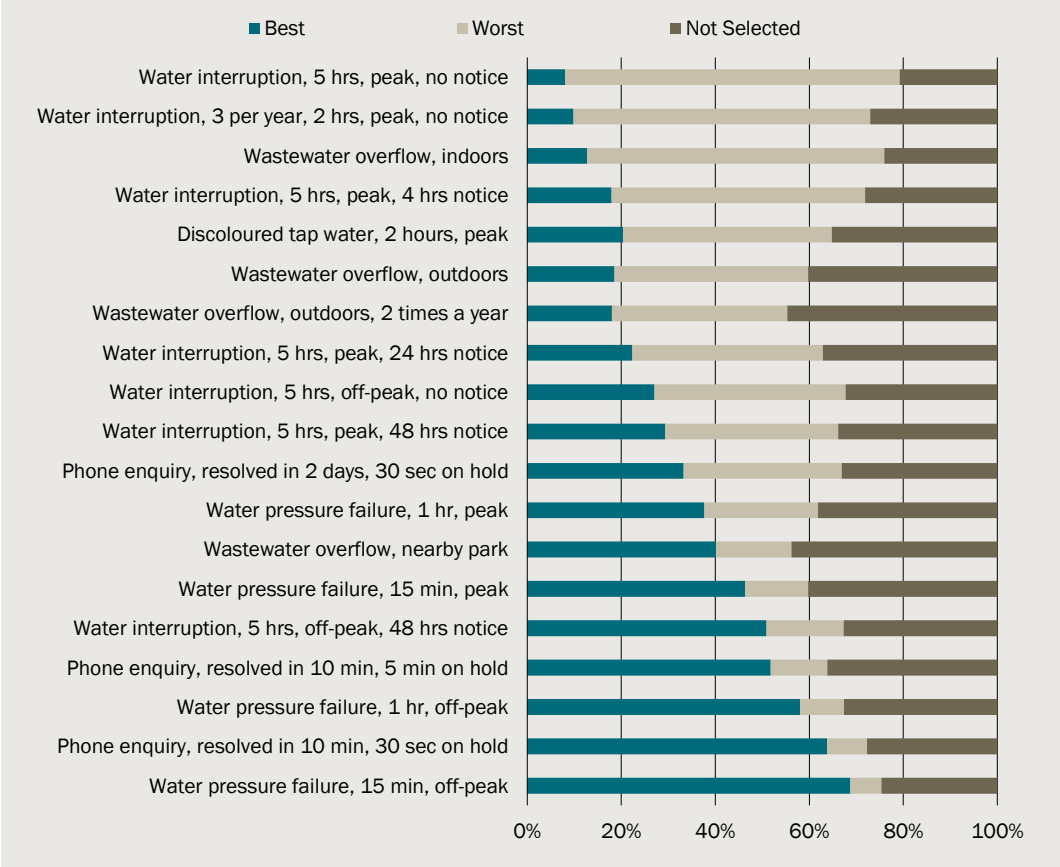
Base All citizen respondents (n=1508)

The results suggest that repeat events do not add significantly to customer inconvenience, with three two-hour water interruptions preferred to one five-hour interruption and similar results for one outdoor wastewater overflow and two outdoor wastewater overflows. This finding is in contrast to the finding from the deliberative forums that

customers tend to be 'much more unhappy' when repeat events occur, particularly in the case of wastewater overflows. It may be that some survey respondents did not fully attend to the frequency attribute as part of a simplifying heuristic in order to answer these relatively complex questions, whereas in the forums this topic was the subject of discussion and specific, targeted keypad polling questions. Further comparison of survey and forum results is set out later in this chapter.

The choice percentages for each event show that the frequency with which events were 'not selected' was at least 20 per cent for every event, indicating that none of the events is subject to bi-polar preferences (where an event is intensely disliked by some respondents and strongly favoured by others).

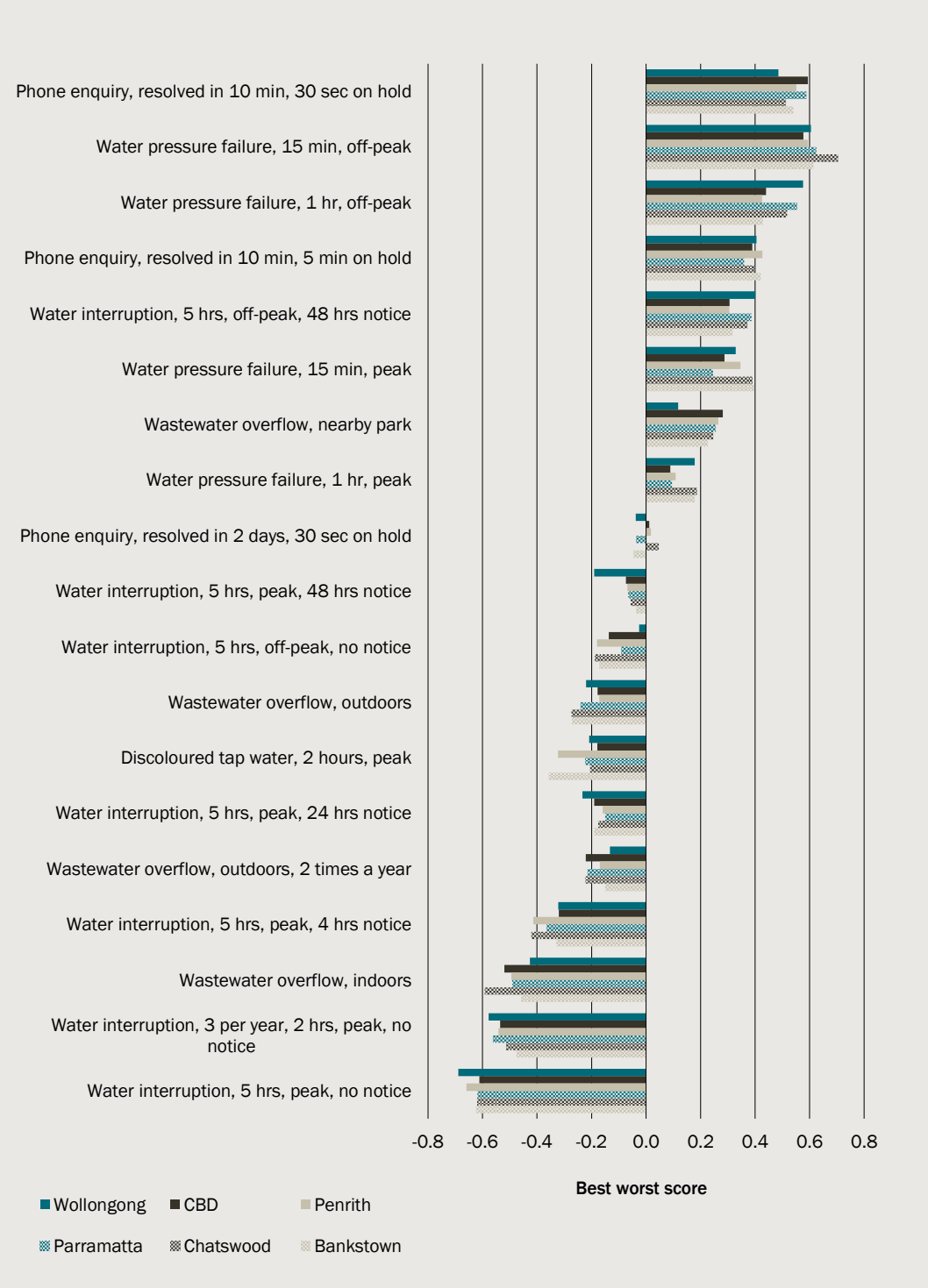
7.12 Choice percentages – all citizens



Base All citizen respondents (n=1508)

Citizens living in Penrith, Bankstown and their respective surrounding areas were found to be more averse to discoloured tap water than residents living in other locations (see figure 7.13). While most citizens indicated that a water interruption during the night without notice would be more inconvenient than a water interruption during the day or evening with 48 hours' notice, citizens from Wollongong and surrounding regions indicated otherwise, on average.

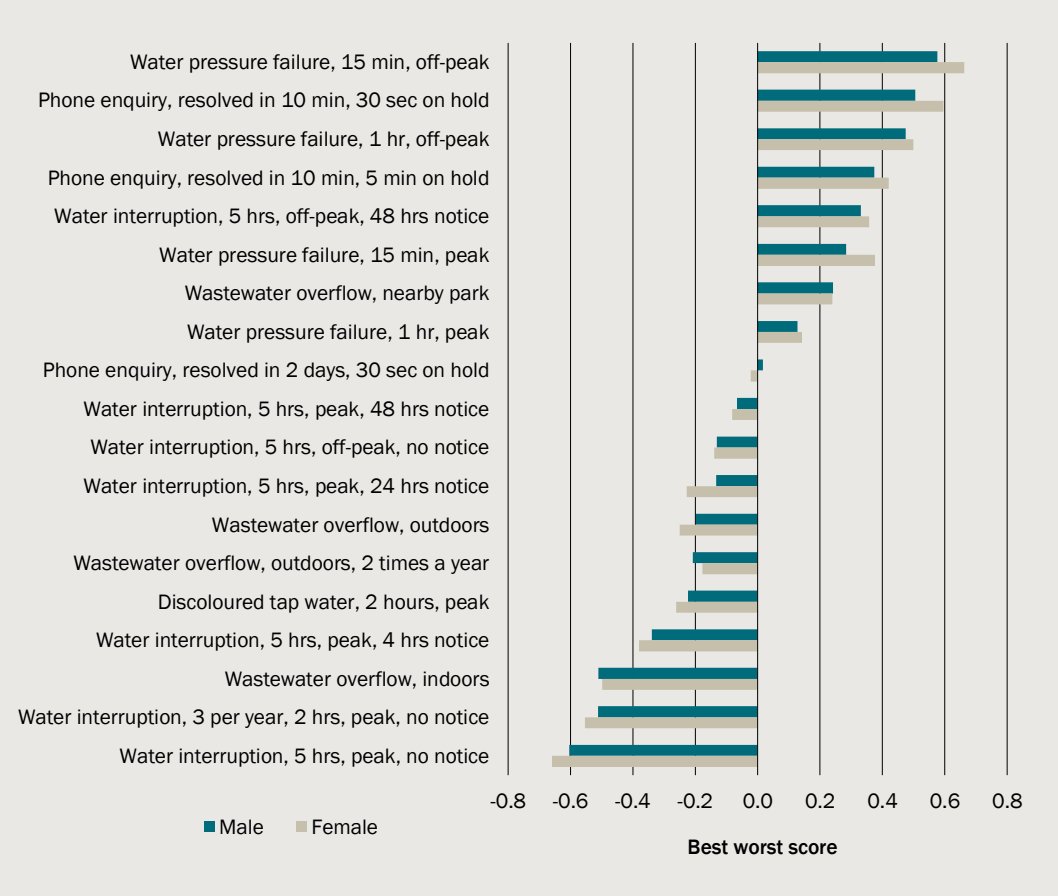
7.13 Relative inconvenience – citizens by region



Base All respondents; Residents (n=1508); Wollongong (n=171), CBD (n=387), Penrith (n=175), Parramatta (n=250), Chatswood (n=287), Bankstown (n=244); unweighted

Note: The exact wording for each event is given in chapter 4

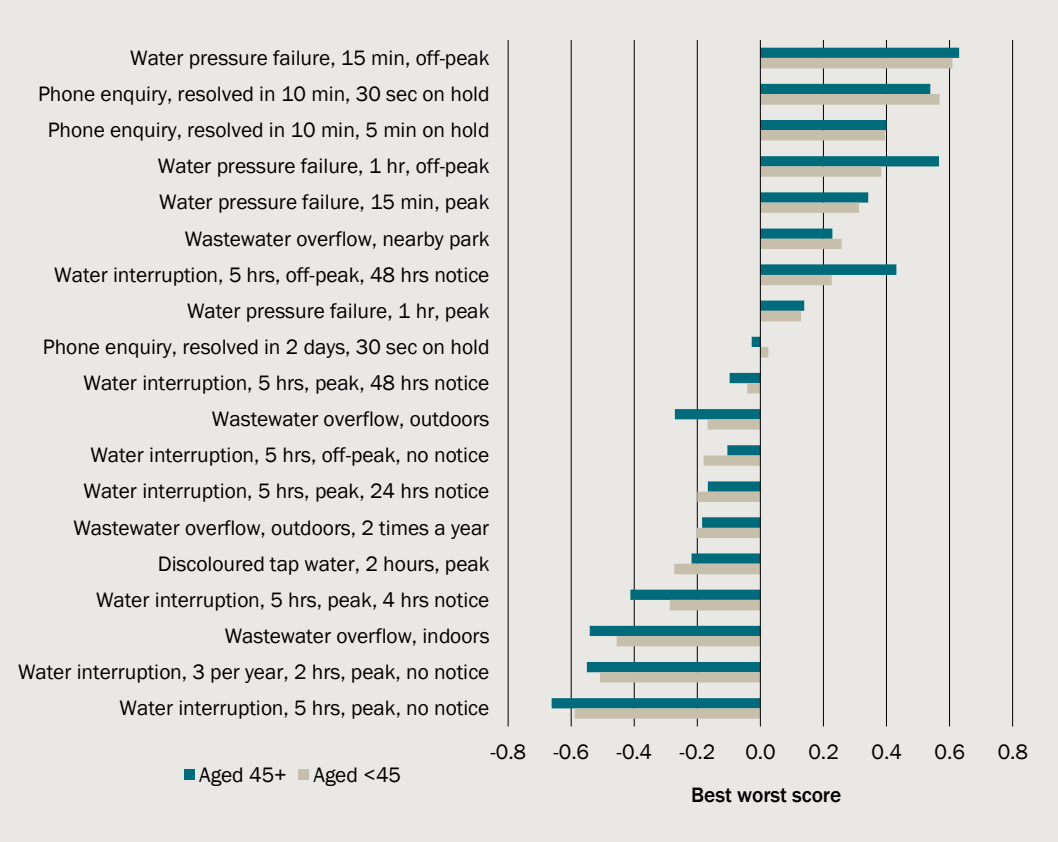
7.14 Relative inconvenience – citizens by gender



Base All respondents; Residents (n=1508); Male (n=740), Female (n=765), others (n=3); unweighted
Note: The exact wording for each event is given in chapter 4

The ranking of events was similar for men and women. It appears women were more consistent in their rankings as a group, with higher scores for the best events and lower scores for the worst events.

7.15 Relative inconvenience – citizens by age

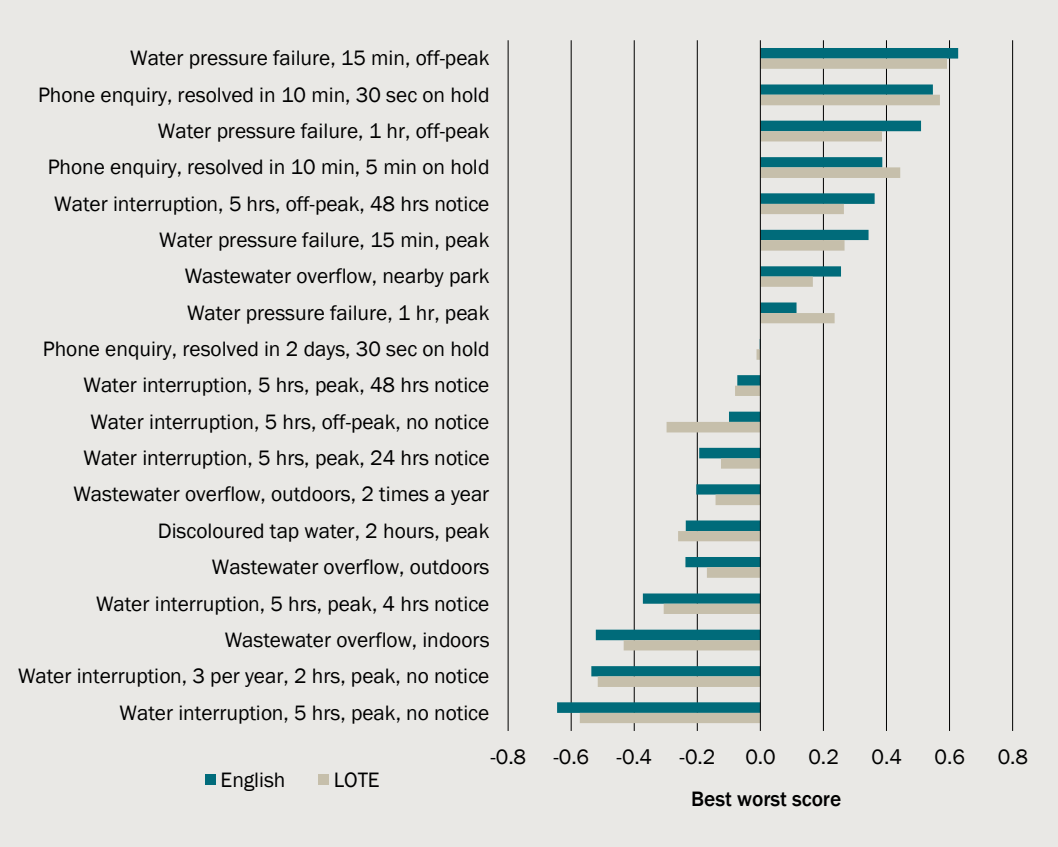


Base All respondents; Residents (n=1508); 45 above (n=861), 45 below (n=647); unweighted

Note: The exact wording for each event is given in chapter 4

Respondents above the age of forty-five appear to be more averse to an outdoor wastewater overflow than younger respondents and less averse to off-peak interruptions and pressure failures.

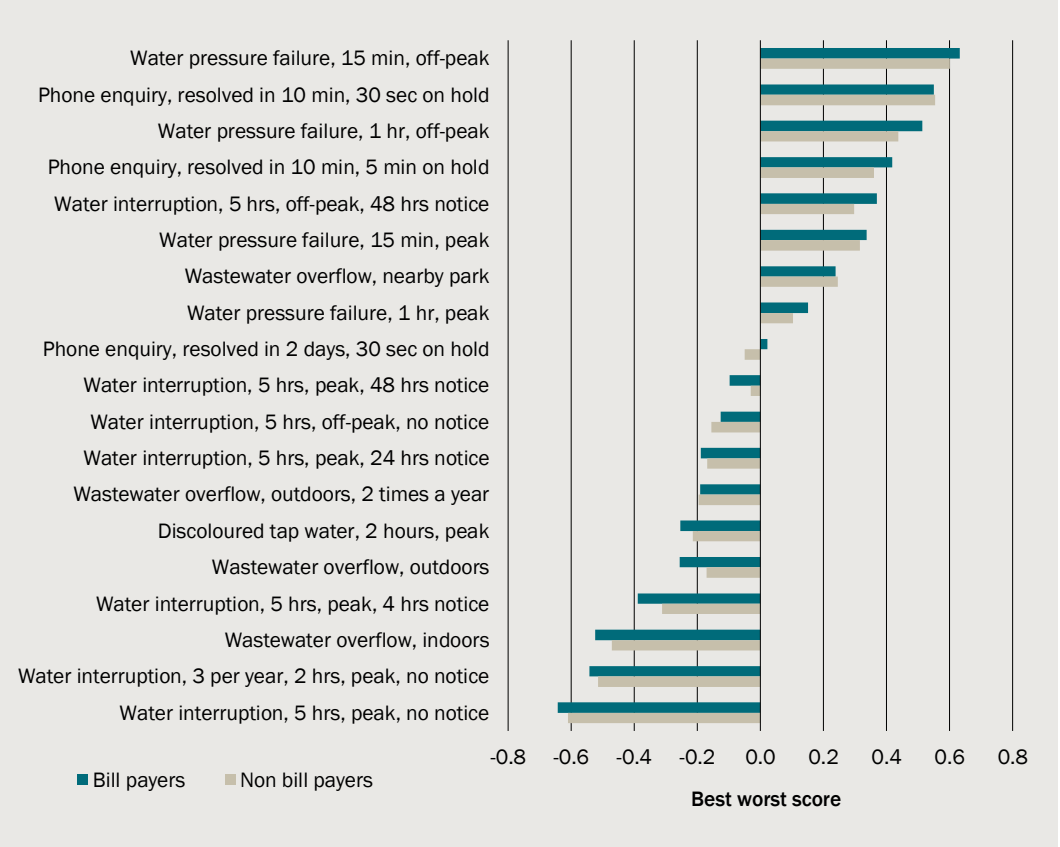
7.16 Relative inconvenience – citizens by language



Base All respondents; Residents (n=1508); English only (n=1232), other (n=276); unweighted
Note: The exact wording for each event is given in chapter 4

Non-English speakers appear to be more averse to off-peak interruptions and pressure failures, relative to English speakers.

7.17 Relative inconvenience – citizens by bill payer

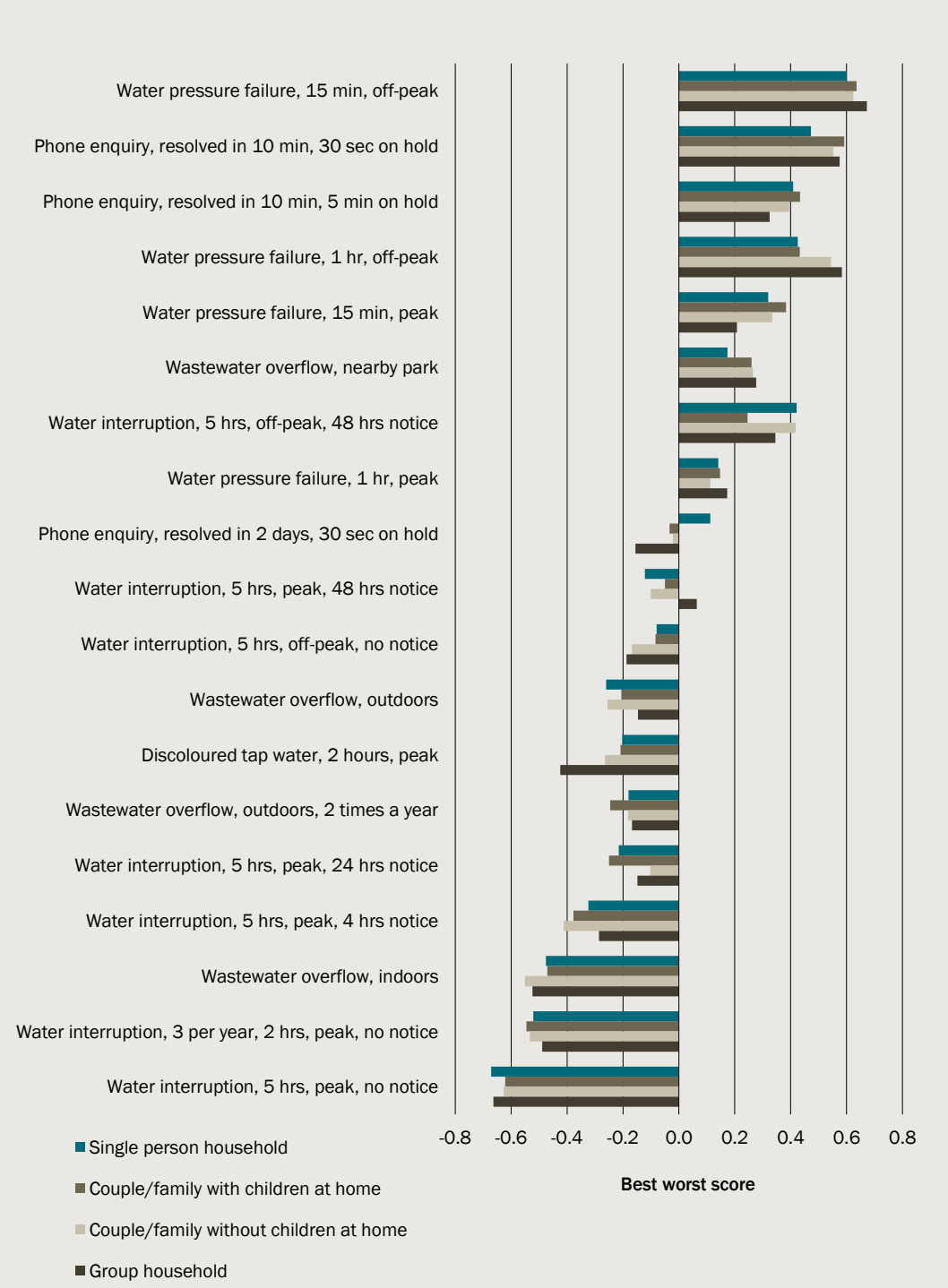


Base All respondents; Residents (n=1508); Bill payers (n=971), Non bill payers (n=537); unweighted
Note: The exact wording for each event is given in chapter 4

The ranking of events by bill payers and renters was very similar. It appears bill payers were more consistent in their rankings as a group, with higher scores for the best events and lower scores for the worst events.

Rankings were similar among the three most common household types – single person, couple/family with children, and couple/family without children (see figure 7.18). Group households appear to rank discoloured water as more inconvenient than do other households.

7.18 Relative inconvenience – citizens by household type



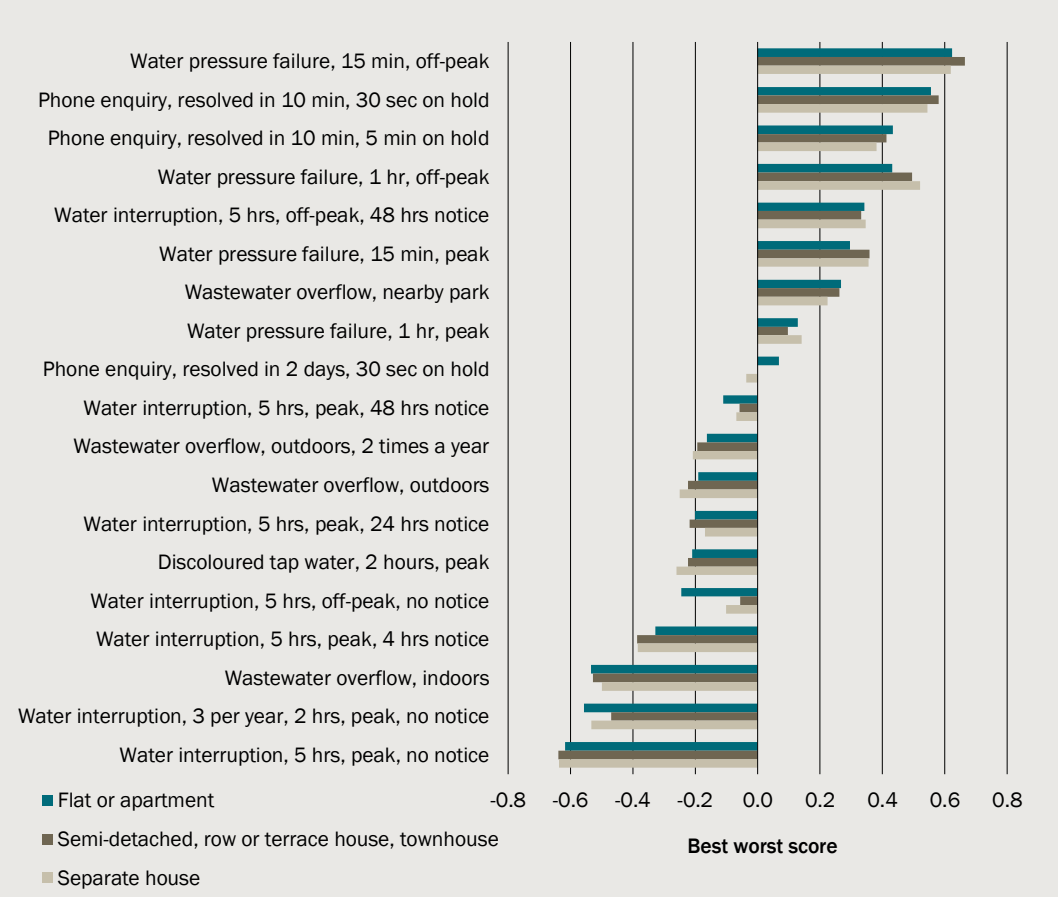
Base citizen respondents from households other than 'other' or 'one parent family' (n=1381); Single person household (n=290), Couple/family with children at home (n=412), couple/family without children at home (n=552), Group household (n=127); unweighted

Citizens identifying as other (n=43) or one parent family (n=84) excluded due to small sample size

Note: The exact wording for each event is given in chapter 4

Rankings were similar across dwelling types, though citizens living in flats or apartments tended to rate off-peak water interruptions without notice as more inconvenient, compared to other types of dwellings.

7.19 Relative inconvenience – citizens by dwelling



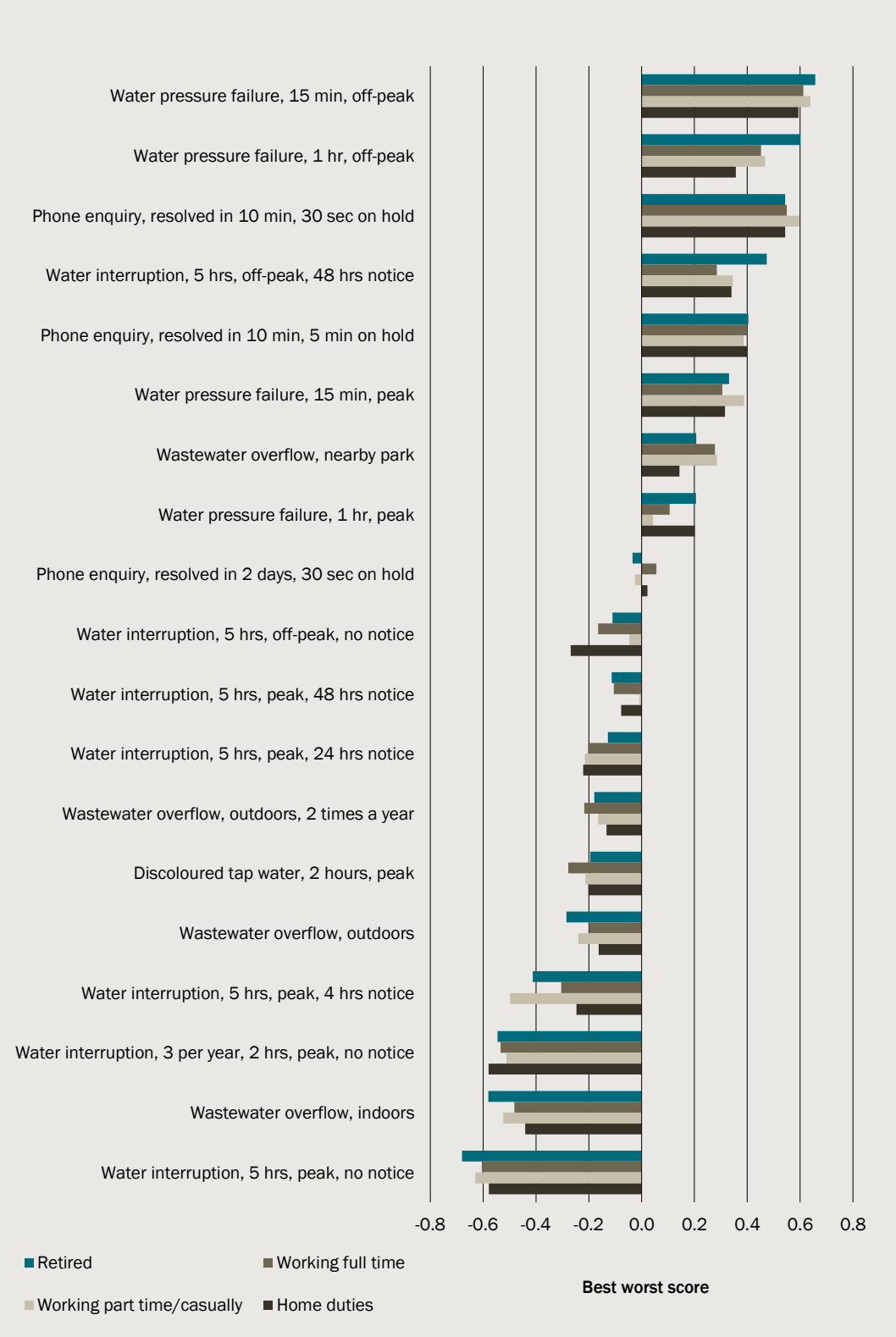
Base citizen respondents from dwellings other than 'other' (n=1476); Flat or apartment (n=418), Semi-detached, row or terrace house, townhouse (n=192), Separate house (n=866); unweighted

Other dwellings (n=32) excluded due to small sample size

Note: The exact wording for each event is given in chapter 4

Rankings were similar among the three most common employment statuses – retired, working full-time and working part-time/casually (see figure 7.20). The sample size for other groups is too small to be certain of differences across groups.

7.20 Relative inconvenience – citizens by employment



Base citizens other than not currently employed, student or other (n=1345); Retired (n=383), Working full time (n=613), Working part time/casually (n=250), Home duties (n=99); unweighted

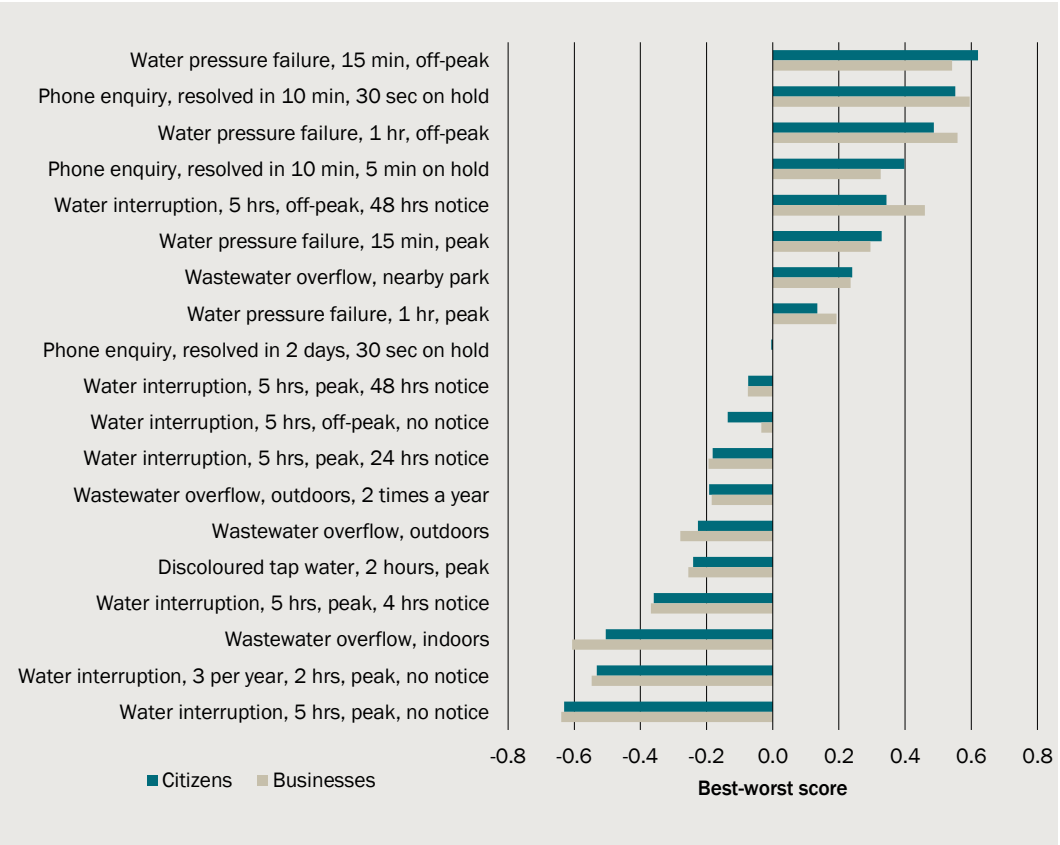
Excludes categories Not currently employed (n=77), Student (n=65), other (n=21) due to small sample sizes

Note: The exact wording for each event is given in chapter 4

Business

The order of preferences of various events is similar between businesses and citizens. One point of contrast, however, is that businesses are less inconvenienced by off-peak water interruptions, which seems reasonable as many businesses operate only during peak hours (5am to 11pm).

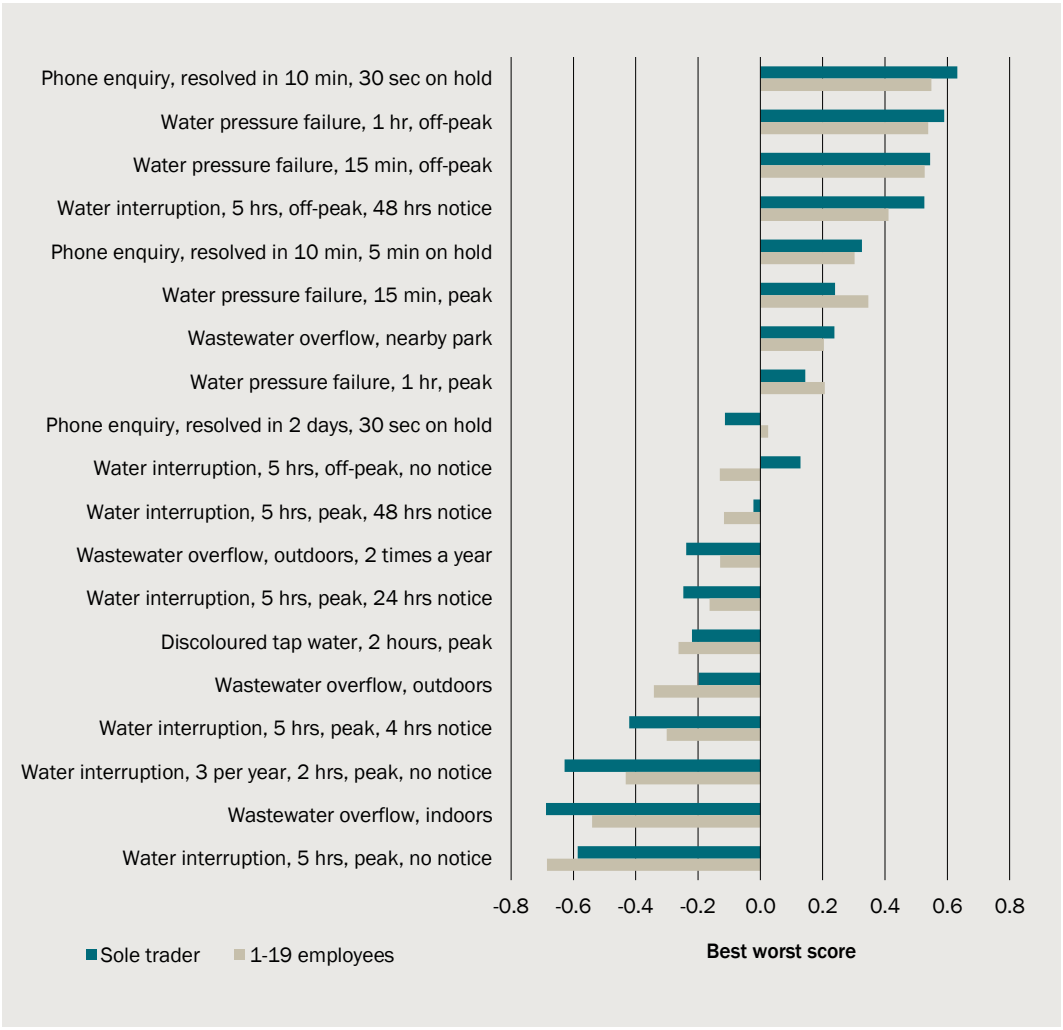
7.21 Relative inconvenience – citizens versus businesses



Base All respondents; citizens (n=1508), businesses (n=251); unweighted
Note: The exact wording for each event is given in chapter 4

The ranking of events was similar for sole traders and businesses with 1-19 employees (see figure 7.22). The sample size for businesses with 20-199 employees is too small to be confident about the ranking of events for that group.

7.22 Relative inconvenience – businesses by business size



Base All business respondents with 19 employees or fewer; businesses (n=231); Sole trader (n=100), 1-19 employees (n=131); unweighted

Businesses with 20-199 employees were excluded due to insufficient sample size (n=20)

Note: The exact wording for each event is given in chapter 4

Comparing forum and survey data on service failure events

The key components of the engagement dealing with customer preferences across different service failure events were:

- the best-worst scaling exercise in the survey – described above; and
- a rebate budget allocation exercise completed by each table group at the deliberative forums (see page 95).

7.23 Methods eliciting customer preferences across service failure events

	Best-worst scaling	Rebate budget allocation
Activity	Self-administered online survey	Group (table) exercise in deliberative forum
Events considered	19 events (3 per question) Did not include 'boil water alert'	10 events Did not include phone enquiries
Measuring	Level of inconvenience	Level of rebate

Source: CIE/Woolcott

Views on inconvenience and rebate levels were largely consistent, including with respect to:

- wastewater overflows and multiple water interruptions without notice both being among the most inconvenient events and attracting the highest rebate budget allocations; and
- water supply interruptions with notice and water pressure failures both being among the least inconvenient events and attracting the lowest rebate budget allocations.

However, there were some differences in results. In particular:

- Higher rebates were allocated to repeat events relative to one-off events in the deliberative forums, whereas the online survey did not find a significant difference in the level of inconvenience. It is not clear why this is the case. Potentially, this resulted from the greater amount of time and group discussion dedicated to the forum activity relative to the online survey.
- The rebate budget allocation placed just 7.4 per cent of the budget on average against a peak water interruption without notice, which was found in the best-worst scaling to be possibly the most inconvenient event of those considered. This may be because the wording "emergency repairs" was used in the rebate allocation in the deliberative forums, but not in the online survey. Past research has found customers are more forgiving of emergency interruptions as distinct from other interruptions without notice.[6] As a result, customers may not expect a large rebate for an emergency event, even if it is very inconvenient.

The forums also included discussion and keypad polling on specific aspects of service performance, such as the amount and method of notice provided for planned water interruptions, the time of day at which water interruptions occur, and repeat events. The forum and survey results were consistent with respect to notice, with both finding that customers prefer more notice (though the survey only considered notice periods up to 48 hours). With respect to time of day, the survey found customers much prefer water interruptions occurring between 11pm-5am to interruptions occurring between 5am-11pm. The forum results showed that these periods are not capturing the granularity of preferences, with both the best (9am-3pm) and worst (5am-9am) times for an interruption contained within the 'day or evening' 5am-11pm descriptor used in the survey. Forum participants also indicated they would be 'much more unhappy' when repeat

6 Hensher, D., Shore, N., and Train, K. 2005. Households' Willingness to Pay for Water Service Attributes. Environmental and Resource Economics 32 (4), 509-531.

interruptions or overflows occur, compared with a one-off event, but this was not reflected in the inconvenience rankings from the survey, as discussed above.

Comparing preferences of bill payers with other citizens

As discussed in Chapter 5, most home owners pay bills direct to Sydney Water and most renters do not. When comparing the preferences of the two groups, we find their perceptions as measured through keypad polling at the deliberative forums were similar in relation to Sydney Water having customer interests at heart and reliability (see chapter 6). There were minor differences on other perceptions of Sydney Water, with home owners/bill payers:

- being more likely to speak positively about Sydney Water;
- giving a higher rating for Sydney Water's openness and honesty; and
- being more likely to give Sydney Water a rating of quite poor or very poor in relation to value for money (though it was still only 18 per cent of home owners giving one of these ratings).

Priority outcomes/values were also similar across the two groups, though bill payers placed greater emphasis on fair/affordable pricing and other customers placed greater emphasis on environmental outcomes (see figure 6.5).

The preferences of the two groups are similar in relation to the preference for communication over supply restoration (figure 7.9), the relative inconvenience of events (see figures 7.17 and 9.14) and relative rebate levels (see table 8.5). In relation to other aspects of service performance and rebates, we found home owners/bill payers:

- were more likely to want broken water pipes to be fixed as quickly as possible, rather than waiting until 9am or 10am for the necessary three-hour water supply interruption;
- were more likely to be 'much more unhappy' about repeat events relative to one-off events (though both groups are clearly more unhappy about repeat events) (see figures 7.6 and 7.8);
- were less likely to prefer email and app notifications for communication of notice (though letter and SMS were the two most favoured methods for both groups) (see figure 7.10); and
- were less likely to indicate that it is important to find ways of providing rebates to renters (though around 60 per cent of home owners still indicated this was quite important or very important) (see figure 8.3).

8 Results: rebates

- **The vast majority of customers were unaware that Sydney Water applies rebates for particular service failures.**
- **Customers favour and expect the continuation of rebates.**
- **Businesses expect their rebates to be higher than rebates to citizens due to potential loss of business, though it should be noted that the role of private business interruption insurance was not discussed.**
- **Customers generally prefer rebates to be paid automatically rather than on application.**
- **Around two thirds of customers think Sydney Water should try to find ways of directing rebates to occupants rather than property owners.**
- **On average, customers think the highest rebates should be paid for wastewater overflows, 'boil water' alerts, and multiple water interruptions without notice (businesses in particular).**
- **On average, customers think little or no rebate should be paid for water pressure failures or water interruptions where notice is given.**

Forums and discussion groups

Within the forums and discussion groups, participants discussed the overall issue of rebates addressing issues such as whether they would expect to receive a rebate for water interruptions, low pressure or overflows, dirty water or boil water events and their reasons for their views. Participants also explored whether they felt a rebate should be offered as a discount for the service not being available or compensation for inconvenience or both, and whether rebates should be paid automatically or on application. Another aspect discussed was whom rebates should be paid to, for example finding ways of providing rebates to renters if they are not already receiving them.

Overall in the forums and group discussions many participants were unaware that Sydney Water provided rebates to customers for certain events or loss of service, and were pleasantly surprised to hear that rebates were provided. Participants were mainly in favour of rebates being paid for water interruptions and wastewater overflows because water is an essential service and therefore it was very important to ensure that service standards remained high. Offering a rebate was felt to be an effective way of

"Rebates will keep them honest – it's a show of good faith rather than actually being practical" - Chatswood

doing this. It was deemed less important to pay rebates for low water pressure events as water was still available during this time and these events were often for a short period.

"If there were no rebates Sydney Water would take longer to fix it – it puts pressure back on them to fix within a certain time"- Wollongong

Business customers strongly believed that rebates should be provided to businesses for water interruptions in particular as water was often crucial for the business to be able to function. They had fewer strong opinions about low water pressure and thought that this depended on the industry and core functions of the business. If the business relied on consistent water pressure and would be impacted by a water pressure failure, then a rebate should be provided. They also believed that rebates should be larger for businesses than residential customers due to the greater impacts.

Most residents were in agreement that the rebate should be paid as a way of providing compensation for the inconvenience caused and because they are paying for a service that they did not receive – "*we are paying for a product that we are not getting*".

Among those who indicated that rebates did not need to be paid, the main reasons for believing so were because they felt that the money should be re-invested into maintaining the water system or that it should be used to reduce the cost of bills overall. Others felt that only extremely serious events would warrant a rebate, for example if it was just a couple of hours without water because of an emergency that was not Sydney Water's fault, that would be fine and a rebate would not be expected.

"It's a compensation for the inconvenience for not having water when you need it and it's also an incentive for Sydney Water to try harder to get water to you" - CBD

"Automatic because the whingers will get it – it makes it more clear and transparent" - Wollongong

The majority of participants across the engagement suggested that the rebate should be automatic rather than on application because it kept the system fair and transparent as some people would not know about the rebates or would not know the avenues to apply, for example the elderly, and those from a non-English speaking background. It was also frequently suggested that if it was not automatic it would seem as though Sydney Water were hoping for or depending on people to not make the effort of claiming. Continuing to pay rebates automatically was felt to show integrity on Sydney Water's part.

The idea of having to apply for a rebate was also felt to be potentially onerous from the customer's perspective with probably a lot of form filling, bureaucracy and 'red tape' involved, with some even suggesting that the cost of setting up this process and having staff to deal with customers might make it more expensive overall for the organisation.

It was suggested by some that while the rebate should happen automatically, it should be highlighted on the bill so it can be seen, rather than simply applied automatically.

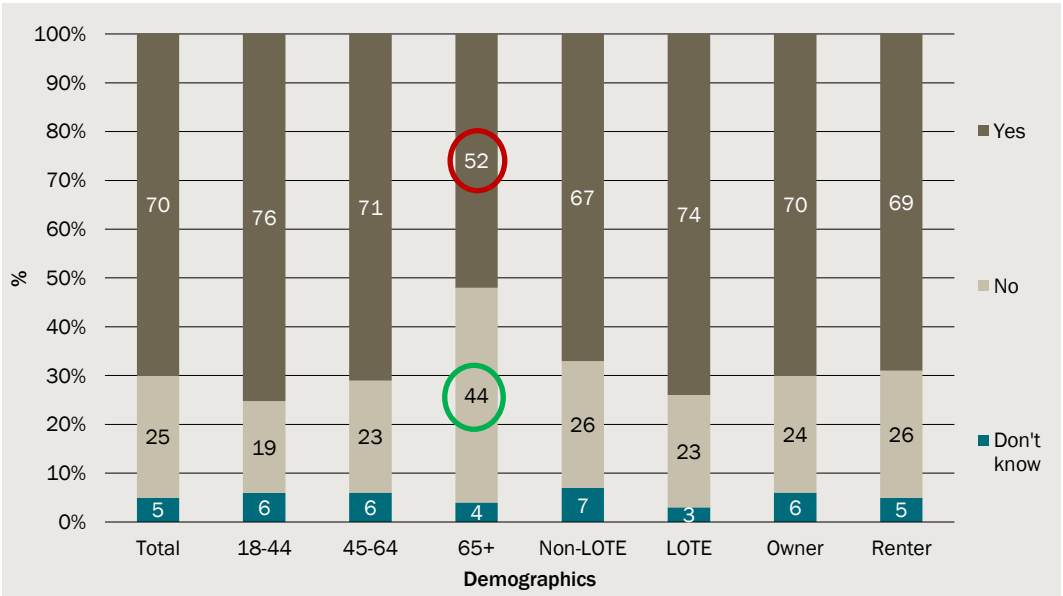
The majority of business customers in the groups thought that rebates should be paid automatically. However, there were some who believed that rebates should be provided on application rather than automatically as the amount should be tailored towards the type of business and the impact of the interruption on the business, which could only be assessed by individual applications.

> *"They need to find a way to offer it to the renter, they're the one impacted"* - Chatswood

On the issue of whether the rebates should be paid to renters or landlords there was a great deal of debate and discussion in the forums and discussion groups. While most initially felt that whoever is paying the bill should receive the rebate, and in most cases this was felt to be the landlord, with greater thought and consideration many indicated that perhaps a proportion of the rebate should be received by the renter as they were inconvenienced by the loss of water, loss of pressure, overflow, etc. It was agreed that Sydney Water would find this difficult to administer so there would need to be an arrangement made between the landlord and tenant or real estate agent.

The participants in the financial hardship groups were likely to say that the occupier should receive the rebate rather than the home owner if they did not occupy the property, particularly if they pay some of the bill.

8.1 Expectation of receiving a rebate



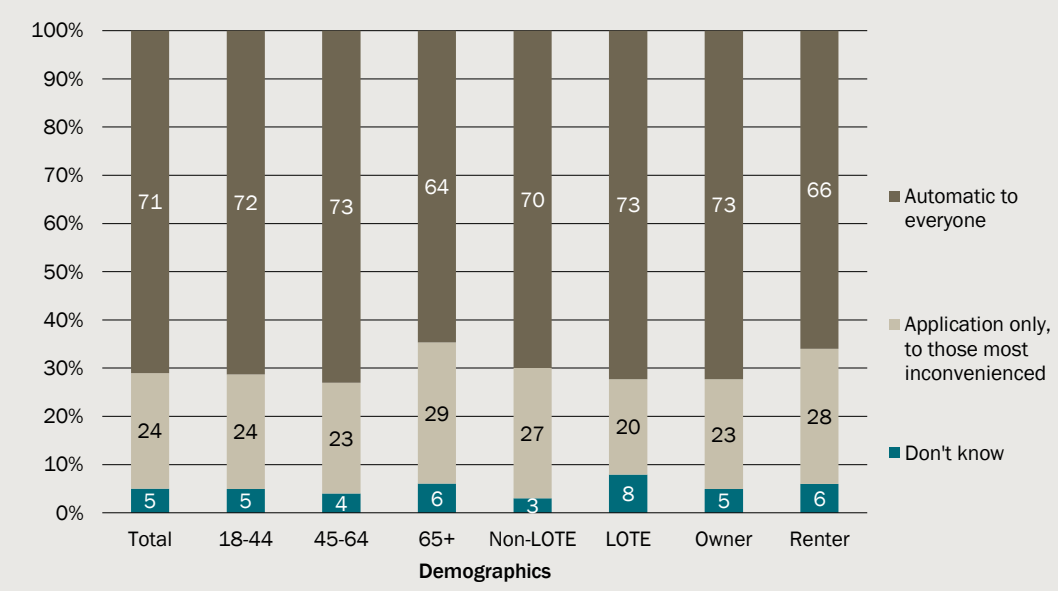
In general, would you expect to receive a rebate for service failures such as water interruptions, low water pressure or wastewater overflows?

Base All respondents n=424 ; 18-44 (n=204), 45-64 (n=132), 65+ (n=88), Non-LOTE (n=349), LOTE (n=75), Owner (n=295), Renter (n=129)

As seen in figure 8.1, in the keypad polling exercise, 70 per cent indicated that they would expect to receive a rebate – with the younger participants (18-44 years) the most likely to expect a rebate and the older participants (aged 65+ years) the least likely. There were some small differences by location with those attending the Bankstown forum significantly more likely to expecting a rebate (83 per cent) than other locations. In terms

of whether the rebate should be automatic or on application (figure 8.2), the result of the keypad polling reflected the comments made during the table discussions with seven in ten (71 per cent) forum participants indicating that the rebate should be paid automatically. There were no significant differences by demographic sub-groups on this issue, although Chatswood forum attendees were more likely to indicate they expected the rebate automatically (84 per cent) and Wollongong forum participants were less likely to expect automatic rebates (57 per cent).

8.2 Preference for automatic rebates or rebates on application

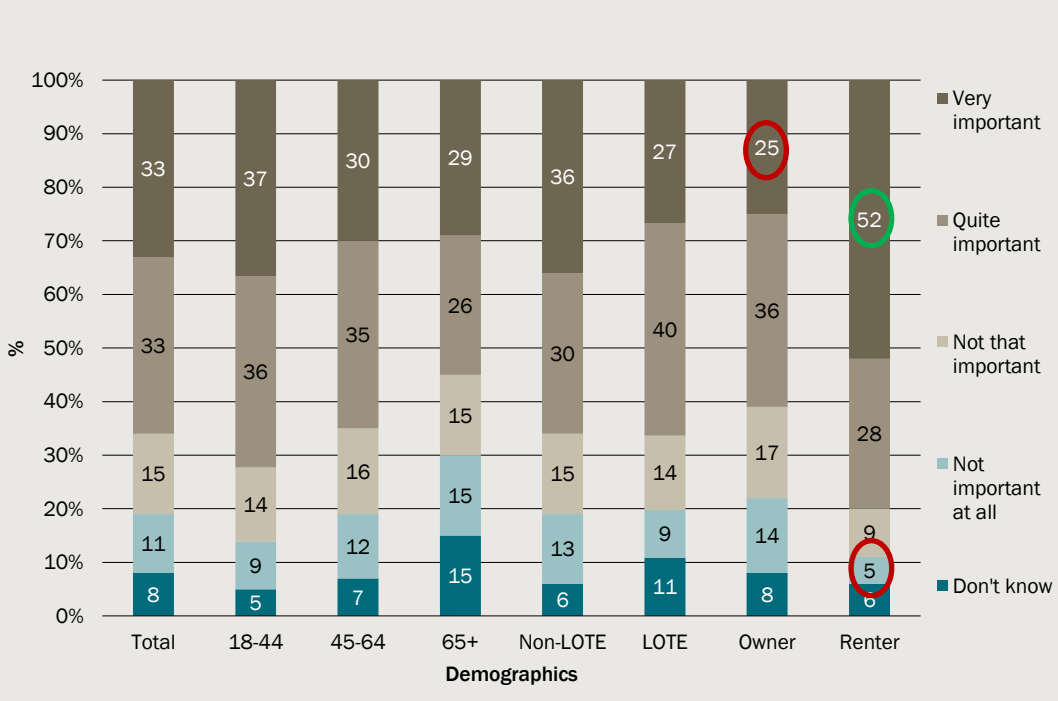


If rebates are paid, should customers automatically receive them, or should they be paid only on application, ie. only paid to customers who apply because they are inconvenienced by the interruption?

Base All respondents n=442; 18-44 (n=205), 45-64 (n=142), 65+ (n=95), Non-LOTE (n=361), LOTE (n=81), Owner (n=309), Renter (n=133)

Participants also voted on the issue of how important they thought it was to find ways of providing rebates to renters (see figure 8.3). Two thirds of the total sample indicated it was important (very + quite important), with perceived importance higher amongst renters (80 per cent). Differences by location included a greater proportion of participants in Wollongong and Penrith and their respective surrounding areas indicating that it was important to find ways to provide rebates to renters.

8.3 Perceived importance of providing rebates to renters



How important is it to find ways of providing rebates to renters?

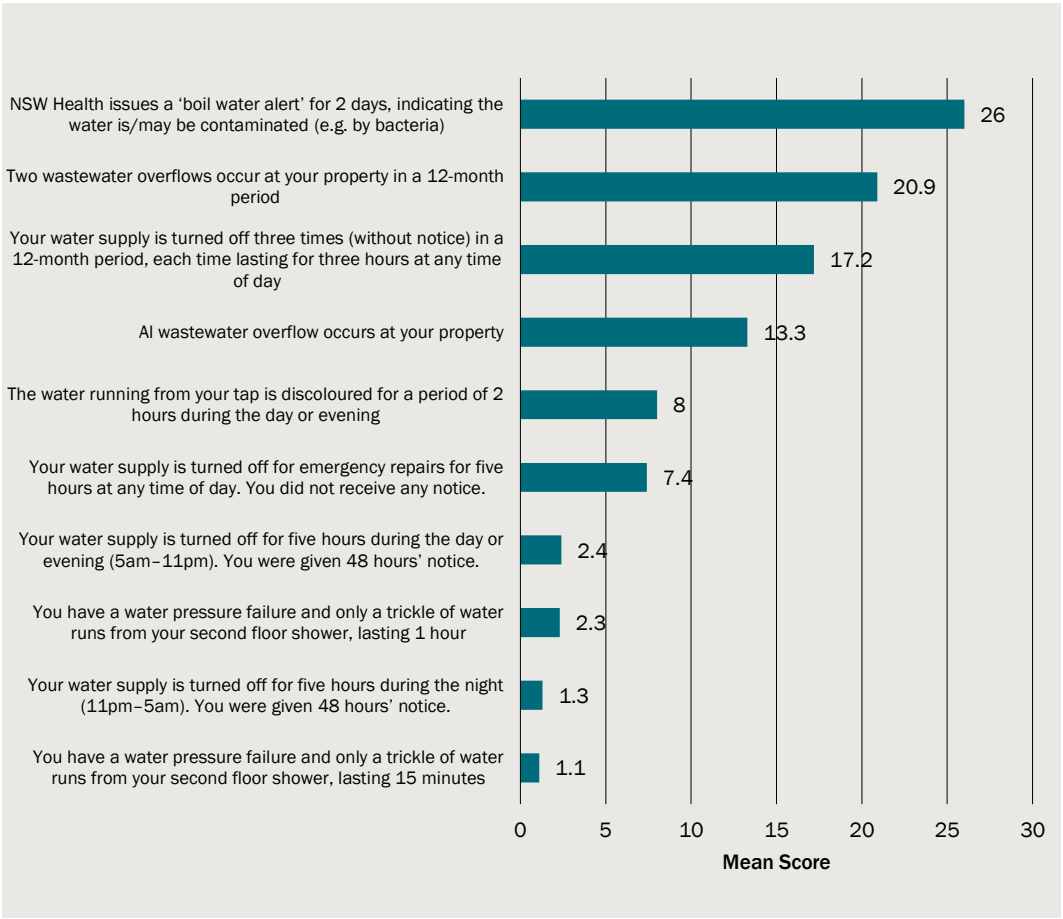
Base All respondents n=446 ; 18-44 (n=207), 45-64 (n=141), 65+ (n=98), Non-LOTE (n=364), LOTE (n=82), Owner (n=314), Renter (n=132)

Rebate budget allocation exercise

Following on from this rebate discussion, participants at the forums completed an exercise in which they allocated 100 tokens to a series of ten events according to the level of rebate they perceived that each event should attract. While doing this exercise, participants discussed their thoughts and feelings and reasons for allocating tokens in the way they did. In an overall sense, it appeared that any issues affecting health and safety were allocated a greater number of tokens, for example a boil water alert and wastewater overflows. Whether customers received prior communication was also a key factor in assessing degree of seriousness or rebate required, as well as total time inconvenienced by the event.

Figure 8.4 presents each of the events according to how many tokens were allocated on average, to each one across the forums. The Penrith forum data has been removed from the chart and table below because one of the events was reworded following the Penrith forum, so results are not comparable to the other forums. Events receiving the greatest number of tokens included a 'boil water alert for 2 days' (26 out of 100) and 'two wastewater overflows on your property in a 12-month period' (21 out of 100).

8.4 Rebate budget allocation exercise



Each table will be given 100 tokens. As a group, please allocate the 100 tokens to the 10 events according to the level of rebate each event should attract.

Base All respondents excluding Penrith n=379; 18-44 (n=181), 45-64 (n=110), 65+ (n=88), Non-LOTE (n=306), LOTE (n=73), Owner (n=270), Renter (n=109)

Viewing the means across demographics, there was strong consistency across all groups (see table 8.5). Differences by location were minimal.

The in-language and financial hardship groups showed similar rebate allocations as the forums. However, the small business groups placed more emphasis on a higher rebate for 'Your water supply is turned off for emergency repairs for five hours at any time of day. You did not receive any notice' than the residential participants. The lack of notice meant that this event was expected to have a large impact on their business and would cause greater inconvenience than for the residential customer. Many business customers stressed the potential impact of a water interruption on trade as it would often mean that their business would have to close for the day.

8.5 Rebate budget allocation exercise by demographics

Event	Total	18-44	45-64	65+	Non-LOTE	LOTE	Owner	Renter
	n=379	n=205	n=135	n=92	n=351	n=81	n=308	n=124
NSW Health issues a 'boil water alert' for 2 days, indicating the water is/may be contaminated (e.g. by bacteria)	26.0	26.7	24.3	27.0	26.7	24.8	25.6	27.2
Two wastewater overflows occur at your property in a 12-month period	20.9	20.7	21.5	20.4	21.1	20.7	21.1	20.4
Your water supply is turned off three times (without notice) in a 12-month period, each time lasting for three hours at any time of day	17.2	16.9	17.0	18.1	17.3	17.0	17.6	16.2
A wastewater overflow occurs at your property	13.3	12.5	13.7	14.2	13.2	13.3	13.5	12.6
The water running from your tap is discoloured for a period of 2 hours during the day or evening	8.0	7.8	8.5	7.6	7.6	8.6	8.1	7.6
Your water supply is turned off for emergency repairs for five hours at any time of day. You did not receive any notice.	7.4	7.8	7.7	6.4	7.4	7.6	7.3	7.8
Your water supply is turned off for five hours during the day or evening (5am–11pm). You were given 48 hours' notice.	2.4	3.0	2.0	1.9	2.2	2.8	2.4	2.5
You have a water pressure failure and only a trickle of water runs from your second floor shower, lasting 1 hour	2.3	2.1	2.6	2.4	2.1	2.7	2.1	2.9
Your water supply is turned off for five hours during the night (11pm–5am). You were given 48 hours' notice.	1.3	1.3	1.2	1.2	1.3	1.2	1.3	1.1
You have a water pressure failure and only a trickle of water runs from your second floor shower, lasting 15 minutes	1.1	1.0	1.5	0.9	1.0	1.3	1.0	1.6

Each table will be given 100 tokens. As a group, please allocate the 100 tokens to the 10 events according to the level of rebate each event should attract.

Base All respondents excluding Penrith n=379; 18-44 (n=181), 45-64 (n=110), 65+ (n=88), Non-LOTE (n=306), LOTE (n=73), Owner (n=270), Renter (n=109)

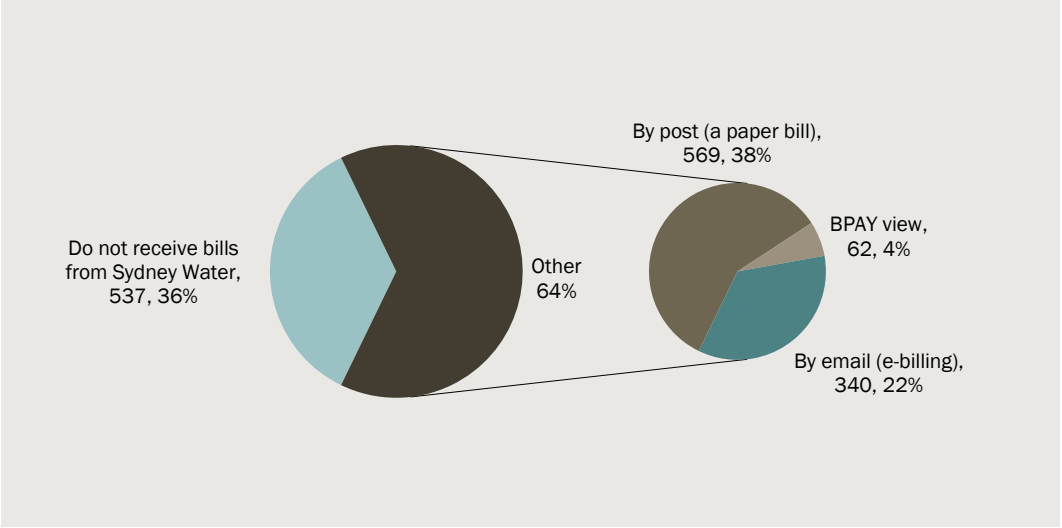
9 Results: discounts and fees for channel usage

- **It costs Sydney Water six times more to send a paper bill than to send an email bill. Yet, around half of the survey respondents currently receiving bills by post did not have an explicit preference for that method.**
- **More than half of the survey respondents currently receiving bills by post would switch to email bills if a fee or discount was introduced.**
- **A fee for paper billing would result in slightly more switching than a discount for email billing.**
- **However, a fee for paper billing is not supported by customers, whereas a discount for e-billing is supported by a majority of customers.**
- **There are a variety of reasons for customers' chosen payment method, including convenience, credit card points, record keeping, ensuring on-time payment and having control.**
- **Up to 45 per cent of citizens and one third of businesses currently paying by BPAY or credit card on the website or phone would switch to paying by direct debit from a bank account if a discount was introduced for that method.**
- **However, none of the direct debit discount options presented to customers received clear majority support.**
- **Customers are generally opposed to fees for payment over the counter at Australia Post.**

Bill delivery method

Around two thirds of the survey samples receive bills from Sydney Water and were asked to respond to questions about bill delivery methods (see figure 9.1). These subsamples comprised 971 citizens and 166 businesses. Some 58 per cent of bill-paying citizens and 55 per cent of bill-paying businesses surveyed currently receive bills by post (a paper bill), which costs Sydney Water around six times more per bill than email billing.

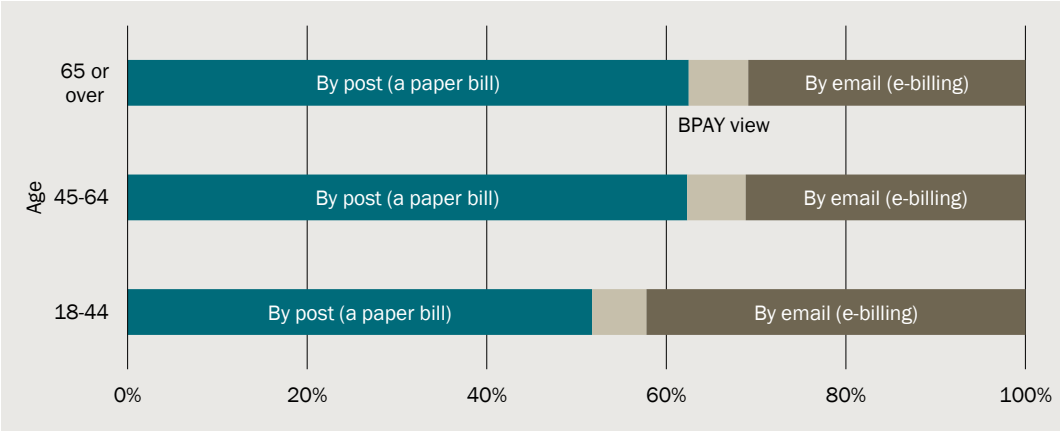
9.1 Citizen bill delivery method



Base all citizen respondents (n=1508)

Citizens over 45 years of age are slightly more likely to receive bills by post than are their younger counterparts.

9.2 Citizen bill delivery method by age

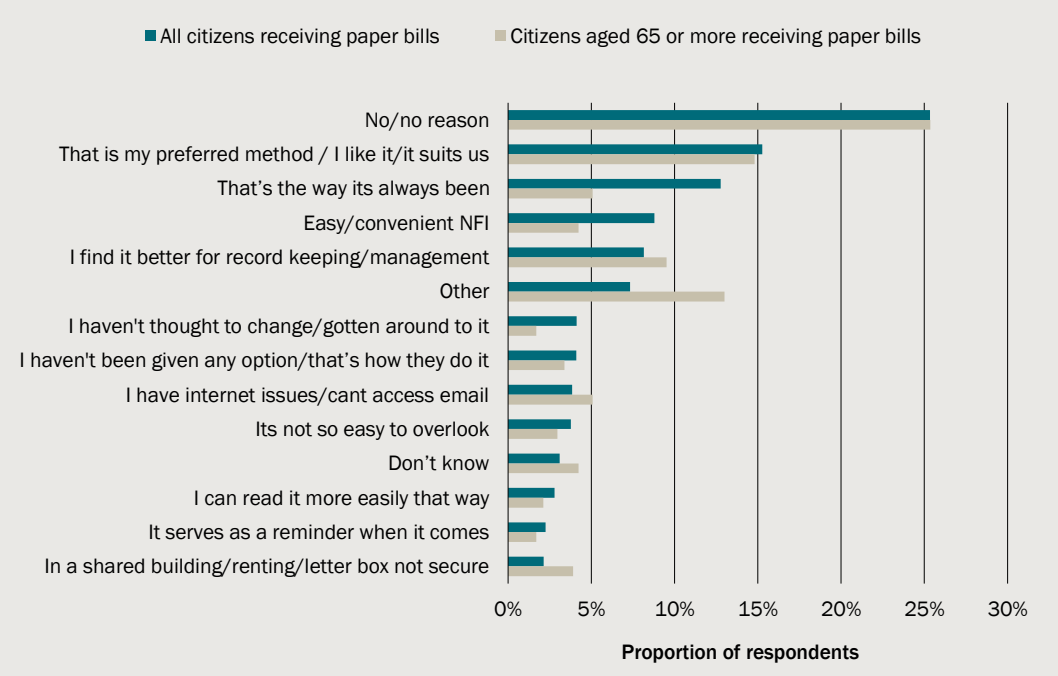


How do you currently receive your water bill from Sydney Water?

Base citizen bill payers (n=971); 18-44 (n=346), 45-64 (n=369), 65+ (n=256)

When respondents receiving bills by post were asked why they receive bills this way, around half indicated a reason consistent with a preference for paper bills (see figures 9.3 and 9.4). The other half indicated there is 'no reason', 'that's the way it's always been', 'I haven't thought to change/haven't gotten around to it', 'I haven't been given any option/that's how they do it' or 'don't know'.

9.3 Reasons citizen customers receive paper bills

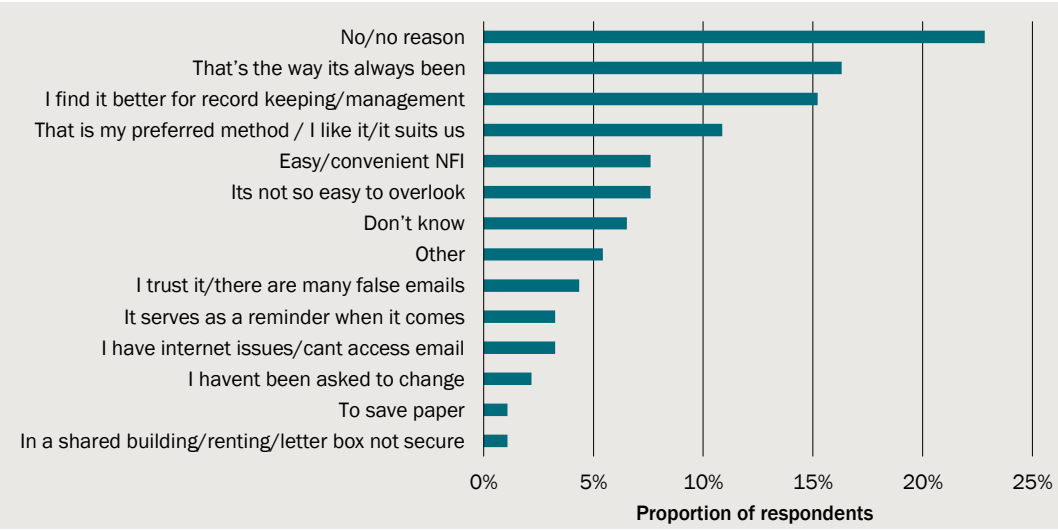


Is there a reason you currently receive your bill this way?

NFI denotes 'no further information'

Base citizen bill payers receiving bills by post (n=569); bill payers aged 65 or more receiving bills by post (n=160); results reweighted for age and language

9.4 Reasons business customers receive paper bills

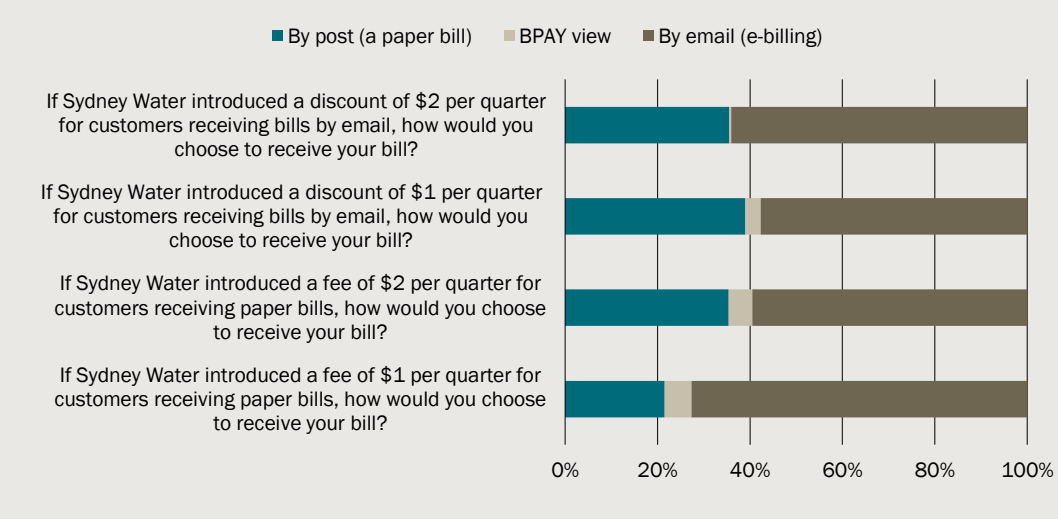


Is there a reason you currently receive your bill this way?

NFI denotes 'no further information'

Base business bill payers receiving bills by post (n=92), unweighted

9.5 Citizen customer bill delivery switching

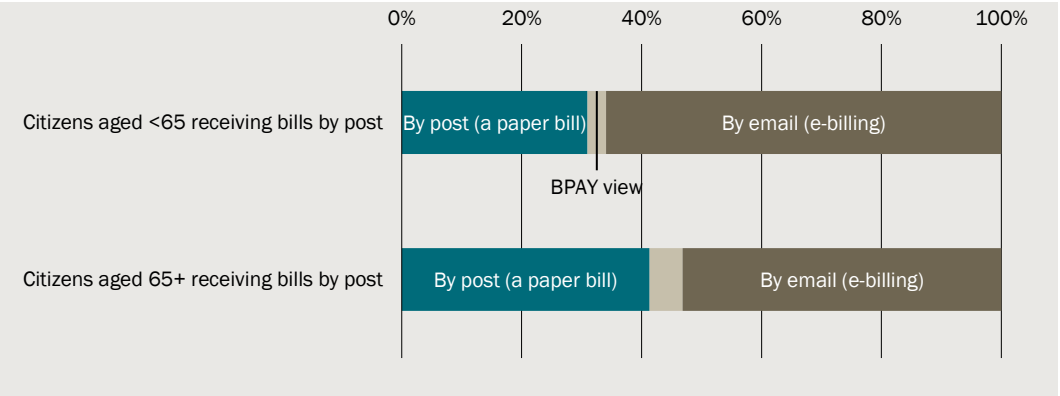


Base bill payers receiving bills by post (n=569), $2 discount (n=139), $1 discount (n=147), $2 fee (n=143), $1 fee (n=140), results reweighted by age and language

One half to three quarters of customers currently receiving bills by post indicated they would switch to e-billing if a fee or discount were introduced. The level of switching was slightly higher for fees than for discounts across both the citizen and business surveys. We did not find significant variation in switching levels based on the level of the fee or discount. The relatively high level of switching recorded for the $1 fee in the citizen survey is partly due to reweighting the data for age and language characteristics, with the unweighted results showing similar levels of switching for the $1 and $2 fees of 71 and 69 per cent.

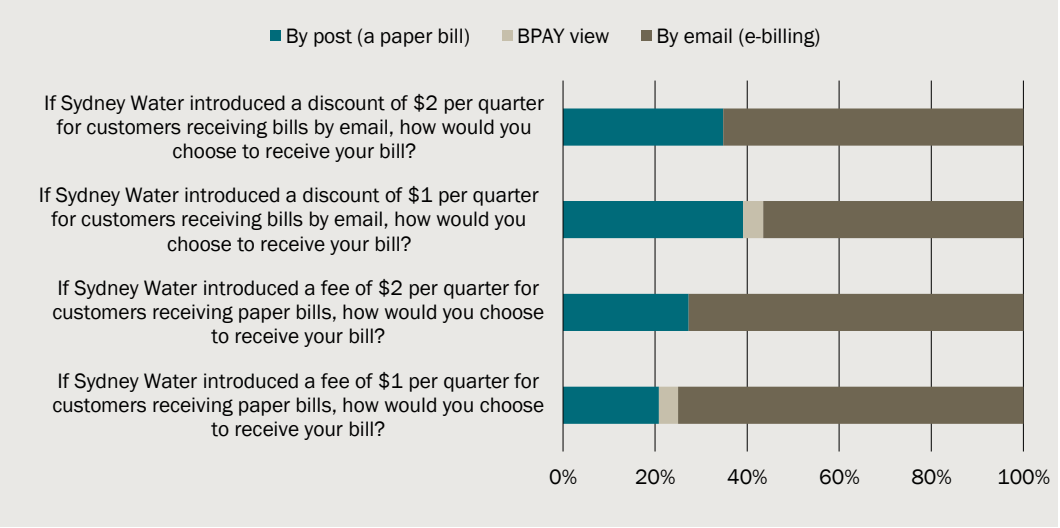
The average level of stated switching across the various fee and discount options was lower for those aged 65 and over than for their younger counterparts.

9.6 Citizen customer bill delivery switching by age



Base bill payers receiving bills by post (n=569), bill payers aged 65+ receiving bills by post (n=409), bill payers aged 65+ receiving bills by post (n=160), reweighted by age and language

9.7 Business customer bill delivery switching

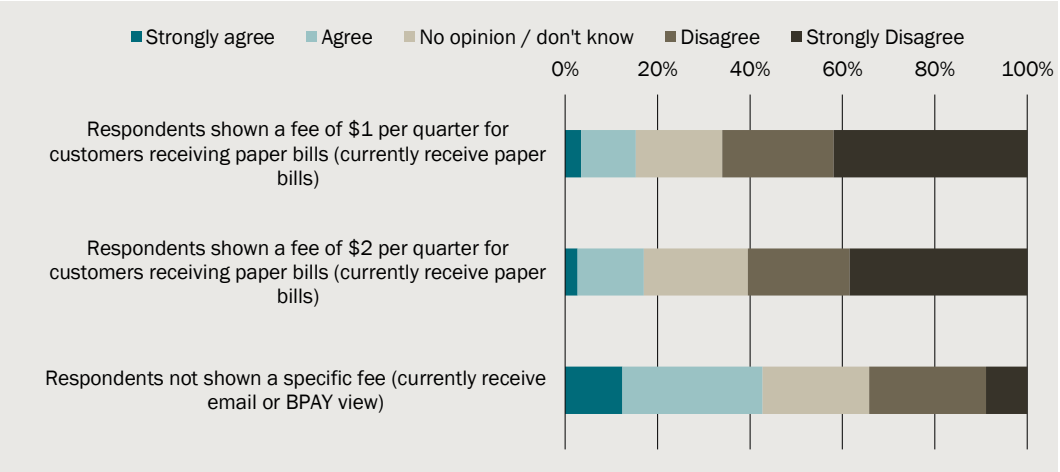


Base bill payers receiving bills by post (n=92), $2 discount (n=23), $1 discount (n=23), $2 fee (n=22), $1 fee (n=24), unweighted

Only around 15 per cent of citizens currently receiving bills by post agreed that Sydney Water should charge a fee for paper billing. More than half of these citizens disagreed that Sydney Water should introduce a fee. Views on the fee did not vary significantly across the $1 and $2 fee levels. Support for a fee was much higher among citizens currently receiving bills by email, with around 40 per cent agreeing that Sydney Water should introduce a fee.

> *"[Pensioners] should not be punished (fees and charges) because they grew up WITHOUT technology."* – survey respondent

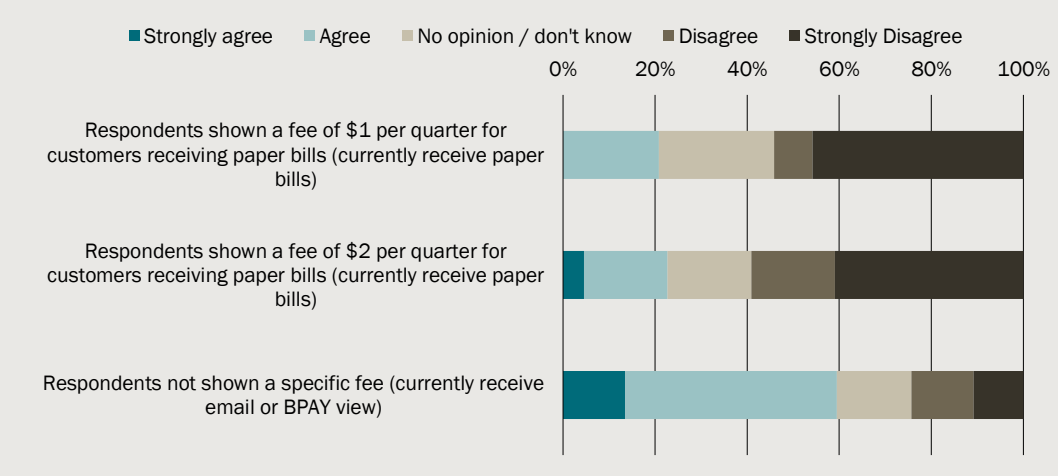
9.8 Citizen views on a fee for paper bills



Do you think that Sydney Water should apply a fee for customers who choose to receive paper bills by post?

Base half of citizen bill-paying respondents (n=486), Respondents shown a $1 fee (n=140), Respondents shown a $2 fee (n=143), Respondents not shown a specific fee (n=203), results reweighted for age and language

9.9 Business customer views on a fee for paper bills



Do you think that Sydney Water should apply a fee for customers who choose to receive paper bills by post?

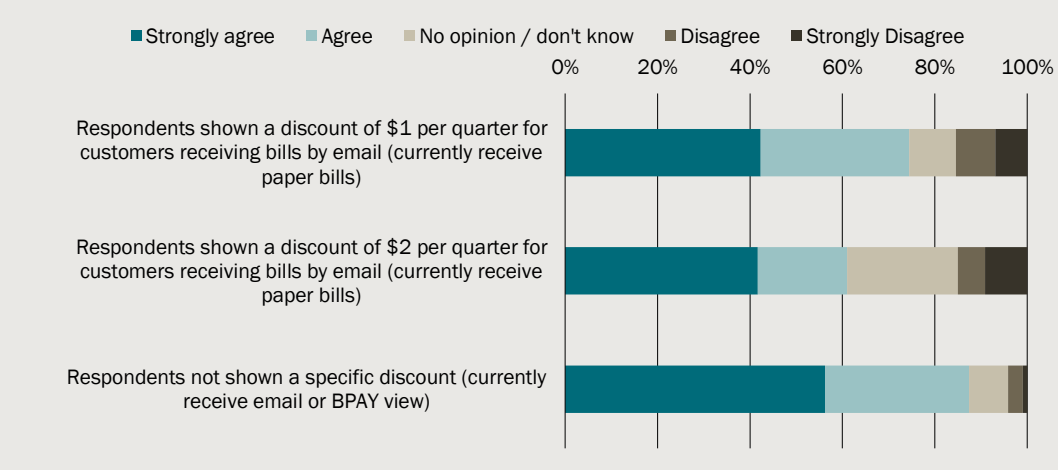
Base half of bill-paying respondents (n=83), Respondents shown a $1 fee (n=24), Respondents shown a $2 fee (n=22), Respondents not shown a specific fee (n=37), unweighted

Business customers were slightly more accepting of a fee than citizens. Around one fifth of business customers currently receiving bills by post and around 60 per cent of business customers currently receiving bills by email agreed that Sydney Water should charge a fee for paper billing.

> *"Email bills can only go to one person and if something happens to that person then no one else can ever find that bill or know it is due!"* – survey respondent

Customers are largely in favour of the introduction of a discount for e-billing, regardless of their current delivery method (see figures 9.10 and 9.11). Around two thirds of customers currently receiving bills by post were in favour of the discount, while more than 80 per cent of customers already using e-billing supported the change. Interestingly, support for the $2 discount was lower than support for the $1 discount, with many more respondents indicating 'no opinion / don't know' in response to the $2 discount. It is not clear from the survey responses why this is the case and Sydney Water may wish to discuss this result with customers in any future engagement on this issue.

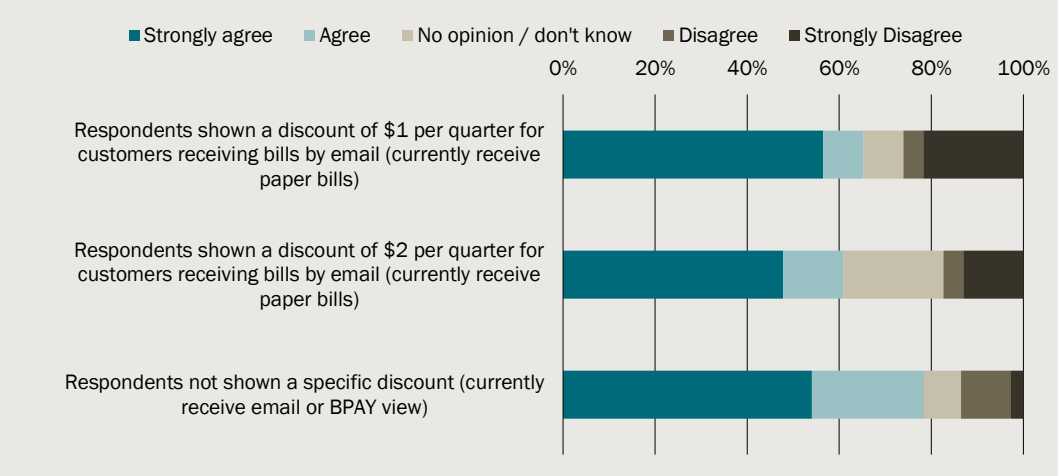
9.10 Citizen views on a discount for e-billing



Do you think that Sydney Water should apply a discount to encourage customers to switch to receiving bills by email?

Base half of citizen bill-paying respondents (n=485), Respondents shown a $1 discount (n=147), Respondents shown a $2 discount (n=139), Respondents not shown a specific discount (n=199), results reweighted by age and language

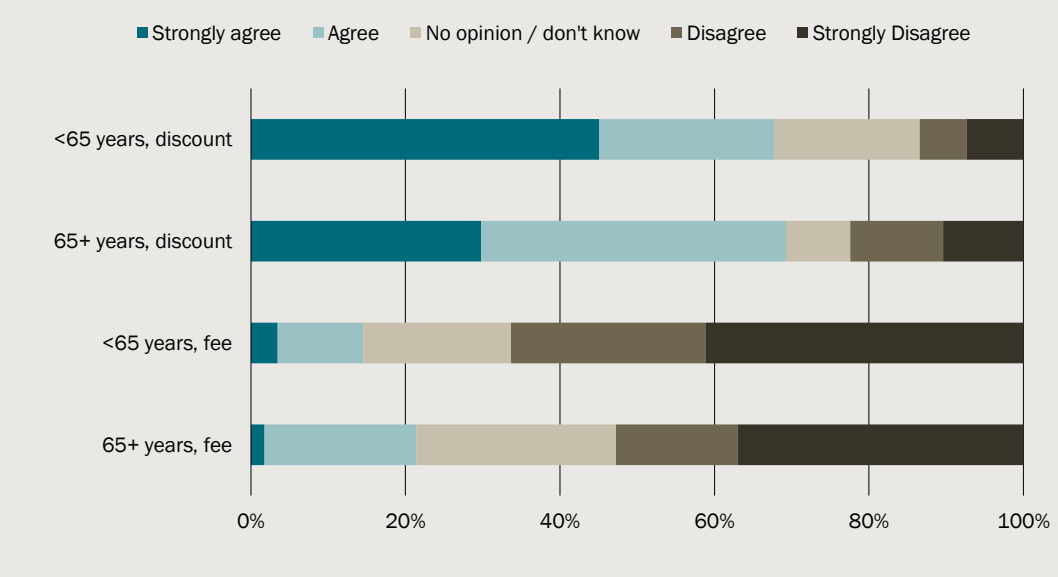
9.11 Business views on a discount for e-billing



Do you think that Sydney Water should apply a discount to encourage customers to switch to receiving bills by email?

Base half of bill-paying respondents (n=83), Respondents shown a $1 discount (n=23), Respondents shown a $2 discount (n=23), Respondents not shown a specific discount (n=37), unweighted

9.12 Citizen views on fees and discounts for bill delivery by age



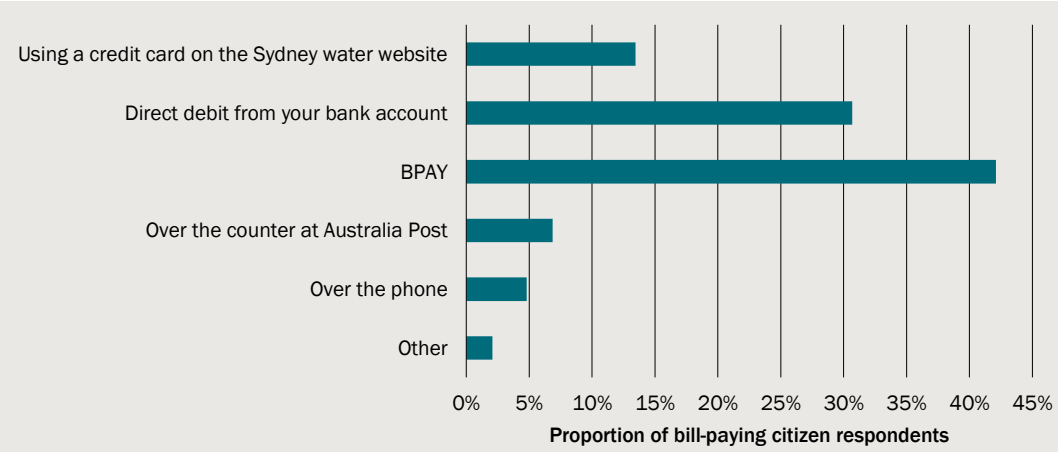
Base bill payers receiving bills by post (n=569), bill payers aged 65+ receiving bills by post (n=409), bill payers aged 65+ receiving bills by post (n=160), reweighted by age and language

Preferences did not vary dramatically with age. The median response to a discount was 'agree' for those aged over 65 and those aged under 65 years. The median response to a fee was 'disagree' for both groups (see the categories aligning to 50 per cent in figure 9.12).

Payment method

Around two thirds of citizen and business respondents receive bills from Sydney Water and were asked to respond to questions about bill delivery methods. These subsamples comprised 971 citizens and 166 businesses.

9.13 Citizen bill payment methods



What method did you use to pay your most recent Sydney Water bill?

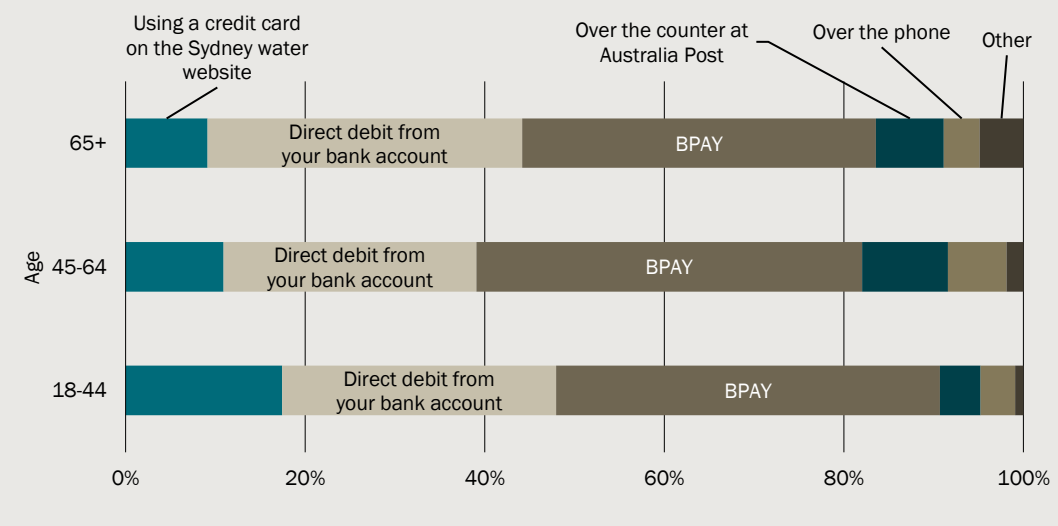
Base bill-paying citizens (n=971), results reweighted for age and language

Around four in ten citizens surveyed use BPAY to pay their Sydney Water bills, around three in ten use direct debit from a bank account and around 15 per cent use a credit card on the Sydney Water website (see figure 9.13). Only around 7 per cent of citizens surveyed pay their bills over the counter at Australia Post.

Payment methods did not vary dramatically with age, however it appears that:

- citizens aged under 45 are more likely to pay using a credit card on the website; and
- citizens aged under 45 are less likely to pay over the counter at Australia Post.

9.14 Citizen bill payment methods by age

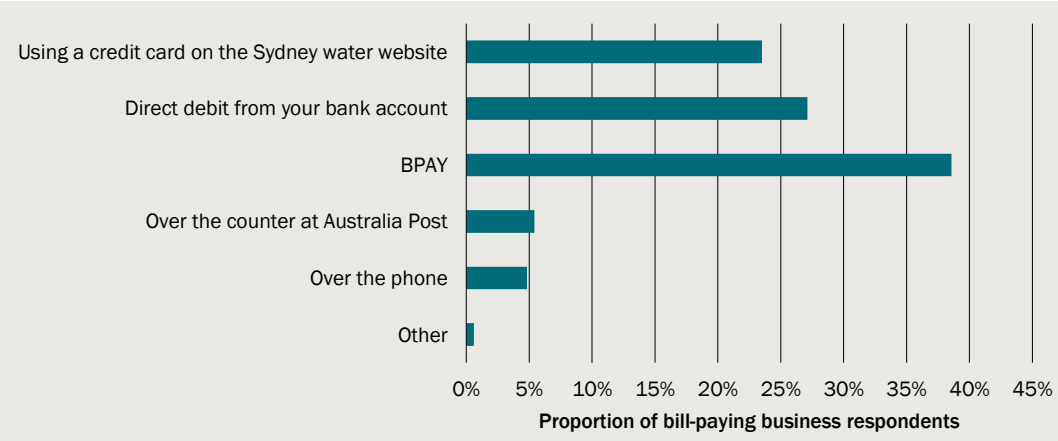


What method did you use to pay your most recent Sydney Water bill?

Base citizen bill payers (n=971); 18-44 (n=346), 45-64 (n=369), 65+ (n=256)

Around four in ten businesses use BPAY to pay their Sydney Water bills, around one quarter use a credit card on the Sydney Water website, and around one quarter use direct debit from a bank account. Only 5 per cent of businesses surveyed pay over the counter at Australia Post.

9.15 Business customer bill payment methods

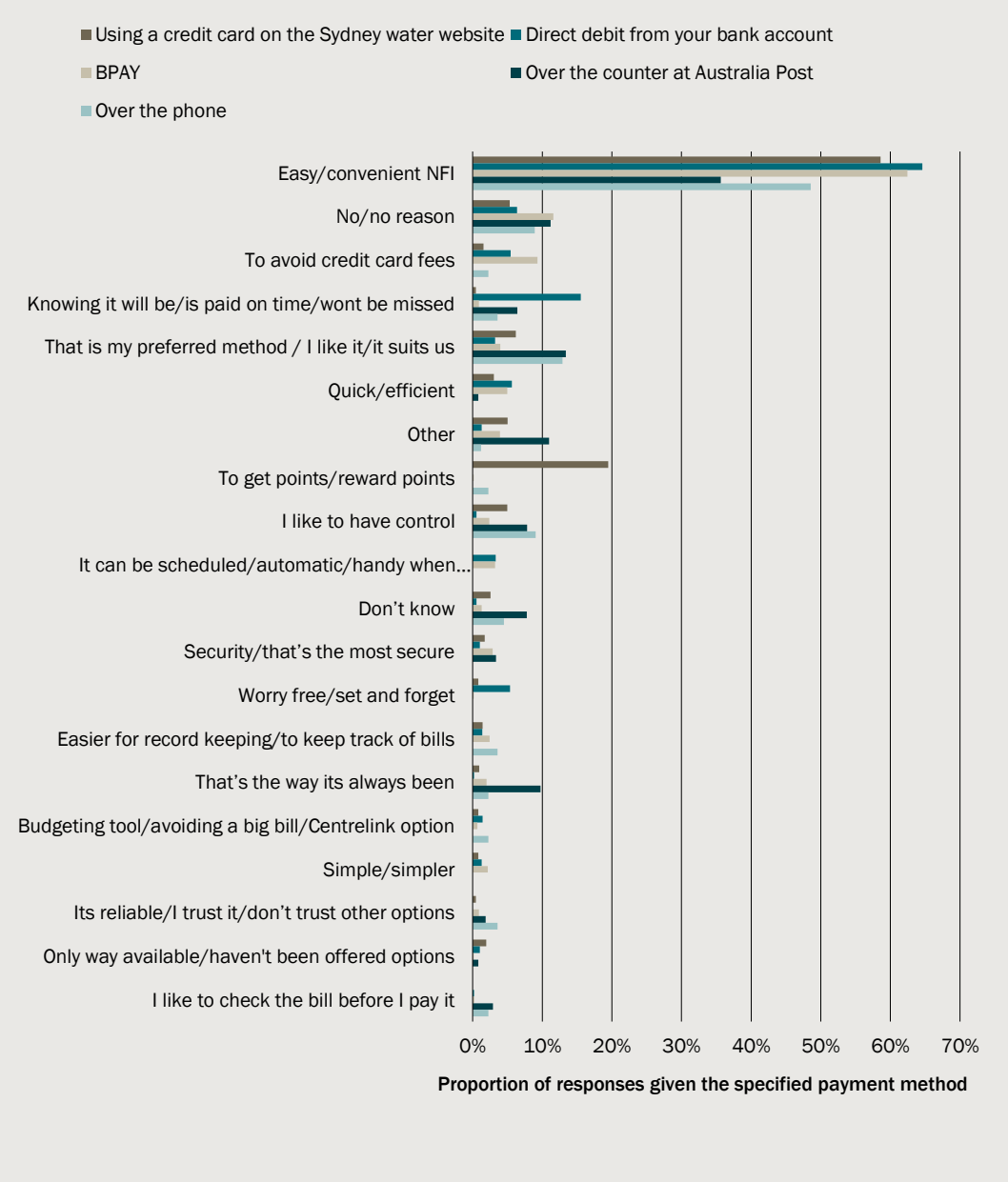


What method did you use to pay your most recent Sydney Water bill?

Base bill-paying businesses (n=166)

When these respondents were asked why they pay bills this way, around 60 per cent of respondents using the three most popular methods indicated a reason associated with ease and convenience. In contrast, only around one third of citizens paying over the counter indicated ease and convenience as their reason.

9.16 Reasons citizens use their chosen payment method



Is there a reason you chose to pay your bill this way?

NFI denotes 'no further information'

Base citizens paying bills by specified method (excluding 'other') (n=950), credit card on website (n=144), direct debit (n=279), BPAY (n=418), over the counter at Australia Post (n=65), over the phone (n=44), results reweighted for age and language

Some of the reasons given that differed across payment methods included:

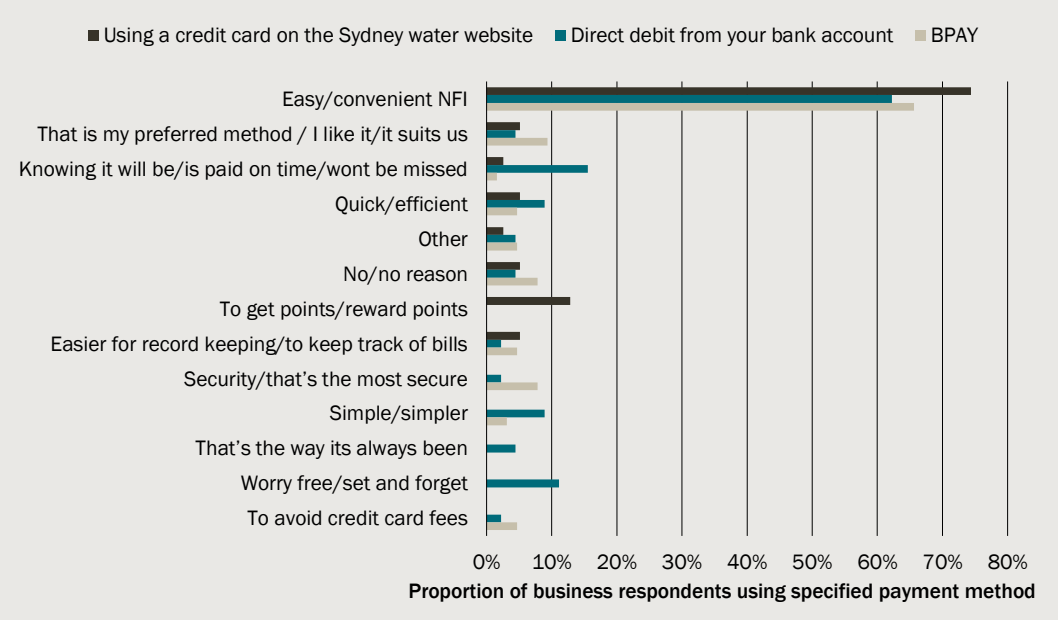
- Around 20 per cent of citizens paying by credit card on the website indicated they do so to earn credit card reward points.

- Around 15 per cent of citizens paying by direct debit indicated they do so to ensure bills will be paid on time and won't be missed.
- Around 10 per cent of citizens paying by BPAY do so to avoid credit card fees.
- Around 10 per cent of citizens paying over the counter do so because 'that's the way it's always been'.
- Some 8-10 per cent of citizens paying over the phone or over the counter do so because they 'like to have control'.

When businesses were asked why they pay bills the way they do, around two thirds indicated a reason associated with ease and convenience, regardless of their chosen method. Some of the reasons given that differed across payment methods included:

- Around one in ten businesses paying by credit card on the website indicated they do so to earn credit card reward points.
- Around 15 per cent of businesses paying by direct debit indicated they do so to ensure bills will be paid on time and won't be missed.
- Around 20 per cent of businesses paying by direct debit indicated they do so because it's either simple, worry-free or set-and-forget.

9.17 Reasons business customers use their chosen payment method



Is there a reason you chose to pay your bill this way?

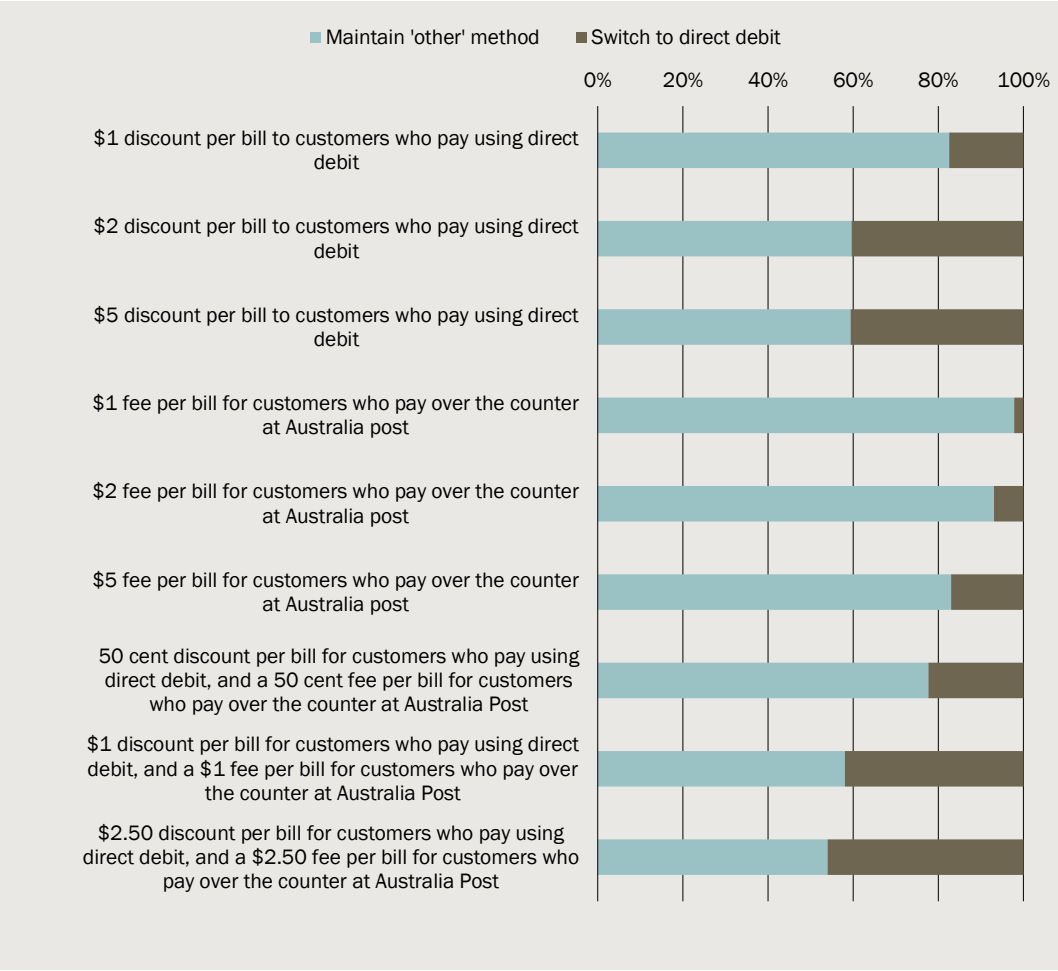
NFI denotes 'no further information'

Base businesses paying bills by credit card on website, direct debit or BPAY (n=148), credit card on website (n=39), direct debit (n=45), BPAY (n=64)

Respondents were presented with a possible fee or discount applying to specified payment methods and asked which payment method they would choose if the fee or discount was introduced. We analysed the stated switching of citizens currently using a payment method other than direct debit or over the counter at Australia Post. Introducing fees for payment over the counter results in very little switching for this group (citizens paying by methods other than direct debit or Aus. Post), as you would

expect, though there is a small amount of stated switching, possibly due to respondent confusion or lack of consideration. Offering discounts for direct debit results in up to 45 per cent of this group switching to the direct debit payment method. The switching level increases with the level of the discount, with switching of around 20 per cent for a $0.50 discount and switching of around 40 per cent for discounts of $2 or more.

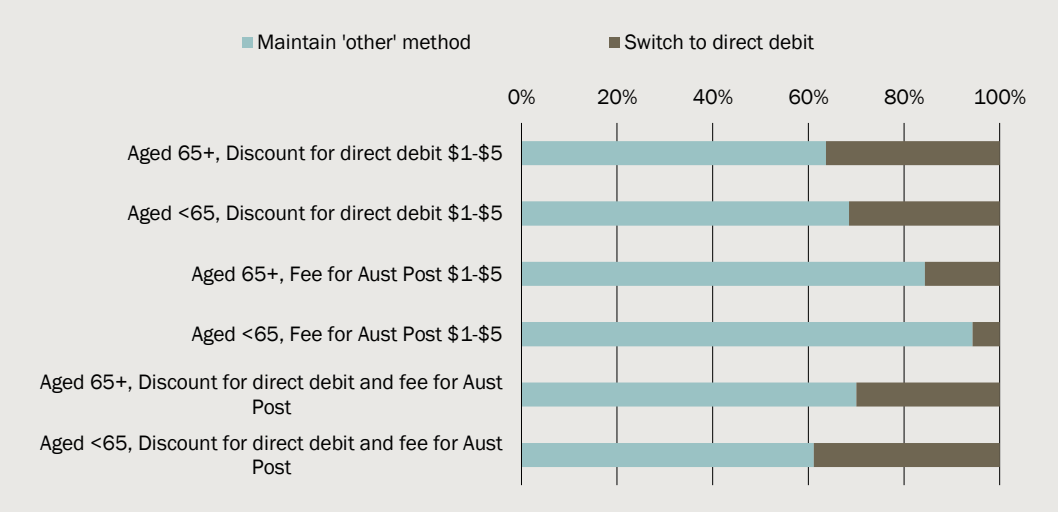
9.18 Citizen payment method switching



If Sydney Water introduced a ..., which method would you use?

Base respondents using payment method other than direct debit or Australia Post (n=627), respondents shown $1 DD discount (n=69), $2 DD discount (n=72), $5 DD discount (n=65), $1 AP fee (n=73), $2 AP fee (n=69), $5 AP fee (n=60), $0.50 fee and discount (n=71), $1 fee and discount (n=69), $2.50 fee and discount (n=79), results reweighted for age and language

9.19 Citizen payment method switching by age



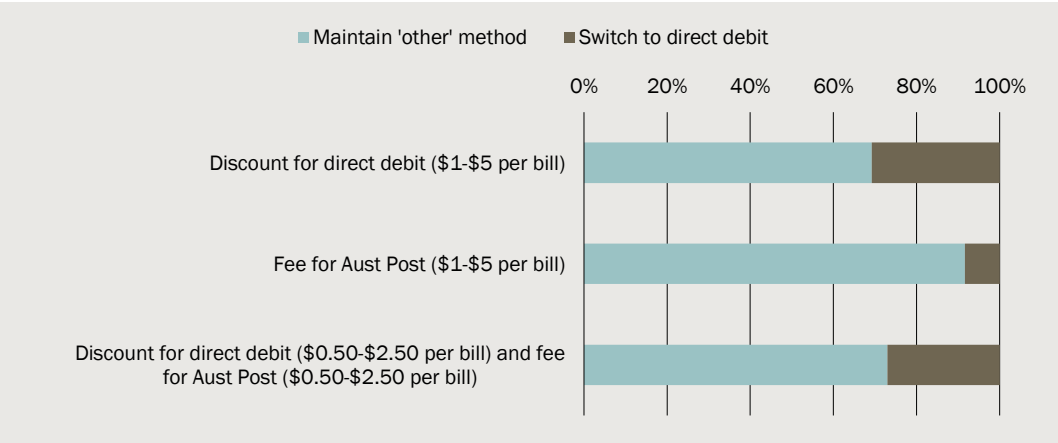
If Sydney Water introduced a ..., which method would you use?

Base respondents using payment method other than direct debit or Australia Post (n=627), respondents aged 65+ shown DD discount (n=55), respondents aged 65+ shown AP fee (n=48), respondents aged 65+ shown fee and discount (n=56), respondents aged <65 shown DD discount (n=151), respondents aged <65 shown AP fee (n=154), respondents aged <65 shown fee and discount (n=163), results reweighted for age and language

The levels of stated switching were similar between citizens aged under 65 compared with those aged 65 and over. Both groups indicated switching levels in the order of 30-40 per cent, on average, across situations where a discount for direct debit is introduced.

Switching levels for the subsample of citizens paying bills over the counter at Australia Post cannot be estimated with confidence since this subsample comprises only 65 respondents. Similarly, the sample size in the business survey is not sufficient to make precise estimates of the level of switching for different levels of discount for direct debit payment. However, it appears that up to one third of business customers currently using methods other than direct debit would consider switching to the direct debit method if discounts in the range $0.50 to $5.00 per bill were offered.

9.20 Business customer payment method switching

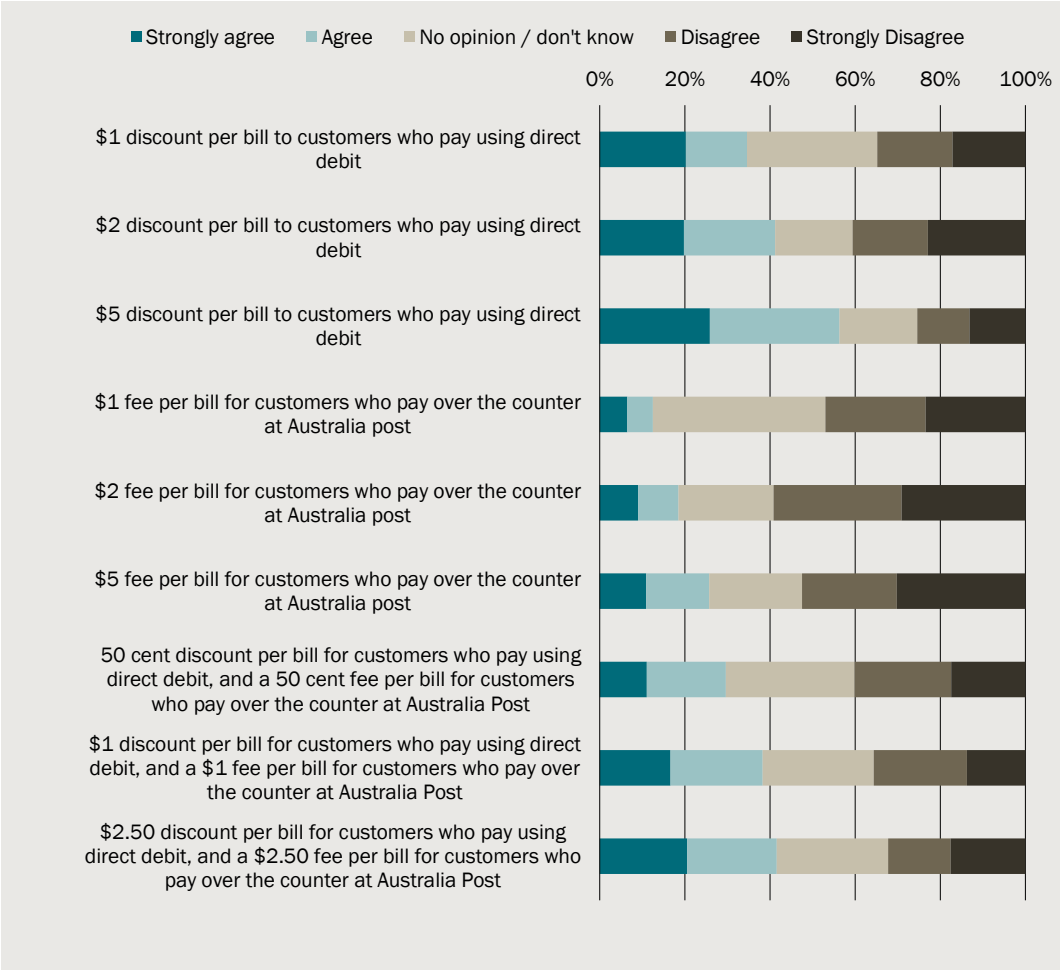


If Sydney Water introduced a ..., which method would you use?

Base respondents using payment method other than direct debit or Australia Post (n=112), respondents shown direct debit discount (n=39), respondents shown an Australia Post fee (n=36), respondents shown both a discount and a fee (n=37)

Customers are split in their views on whether fees or discounts for payment methods should be introduced. None of the options involving discounts were supported or opposed by more than half of customers surveyed, other than the $5 discount for direct debit, which was supported by just over half of citizens surveyed. The options involving only a fee for over-the-counter payment were the least supported. Around half of the citizens surveyed opposed these options, with only 10-30 per cent supporting it. Similarly, half to two thirds of businesses opposed a fee and only 10-20 per cent supporting it.

9.21 Citizen views on fees and discounts for payment method

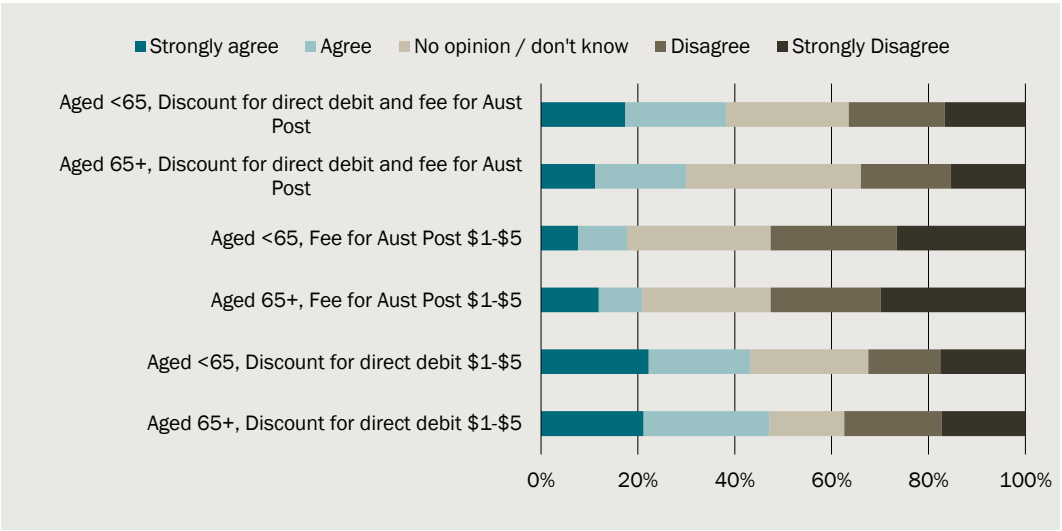


Do you think that Sydney Water should make this pricing change?

Base bill-paying citizens (n=971), respondents shown $1 DD discount (n=107), $2 DD discount (n=110), $5 DD discount (n=108), $1 AP fee (n=108), $2 AP fee (n=109), $5 AP fee (n=105), $0.50 fee and discount (n=108), $1 fee and discount (n=105), $2.50 fee and discount (n=111), results reweighted for age and language

These views did not vary significantly across respondents aged 65 years and over compared to their younger counterparts (see figure 9.22). For both groups, the median response was 'no opinion / don't know' for options involving a direct debit discount and 'disagree' for options involving only a fee for over-the-counter payment.

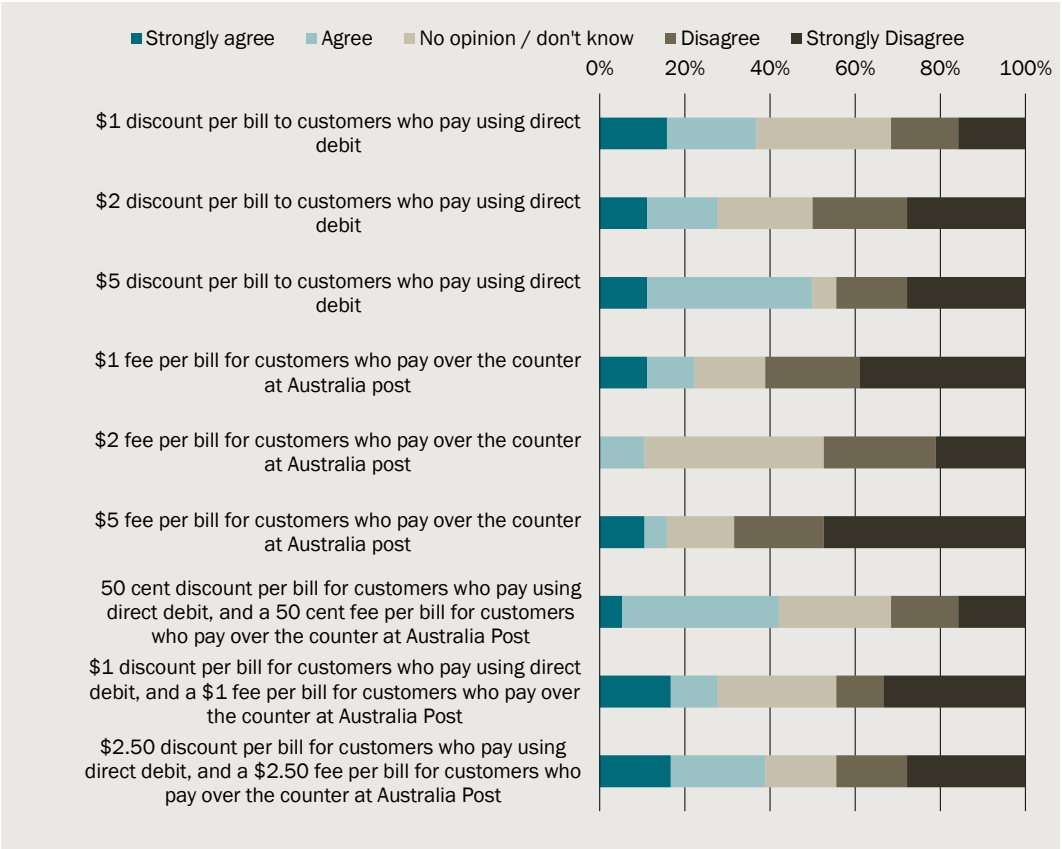
9.22 Citizen views on fees and discounts for payment method by age



Do you think that Sydney Water should make this pricing change?

Base respondents using payment method other than direct debit or Australia Post (n=627), respondents aged 65+ shown DD discount (n=55), respondents aged 65+ shown AP fee (n=48), respondents aged 65+ shown fee and discount (n=56), respondents aged <65 shown DD discount (n=151), respondents aged <65 shown AP fee (n=154), respondents aged <65 shown fee and discount (n=163), results reweighted for age and language

9.23 Business views on fees and discounts for payment method



Do you think that Sydney Water should make this pricing change?

Base bill-paying businesses (n=166), $1 DD discount (n=19), $2 DD discount (n=18), $5 DD discount (n=18), $1 AP fee (n=18), $2 AP fee (n=19), $5 AP fee (n=19), 50c discount and fee (n=19), $1 discount and fee (n=18), $2.50 discount and fee (n=18)

10 Results: customer representation

- **Customers at the forums favour the use of forums for obtaining community feedback, supplemented by group discussions and online surveys.**
- **Customers have concerns about the representativeness of advisory panels, phone surveys and social media.**
- **There was no awareness of the Customer Council among participants.**
- **After it was explained to them, customers supported the idea of the Customer Council (if used with other forms of engagement).**
- **Most saw it as a 'mid-tier' consultation group to represent special and minority interests (thereby it was seen by some as a politically correct, tick box exercise).**
- **The Customer Council as it currently stands is not seen as representing 'regular' customer views. However, they found it difficult to see how regular customers could be included.**
- **Many thought that the Council should be left as is, possibly with a different name (as it is not a Council made up of customers), and that mass customer views should be obtained by more traditional and robust methods such as forums, surveys and group discussions.**

Forums and discussion groups

Preferred community feedback mechanisms

Participants were asked to suggest their preferred methods by which the community could have an input into Sydney Water's decision making. The idea of engagement forums such as the one people were currently attending emerged as a preferred option for forum participants. Obviously, this would have been influenced by the fact that most participants were enjoying their experience and, in that sense, they were a biased sample.

Nonetheless, it was felt that the forum approach had a number of important advantages. Participants were thought to be more accountable for their contributions in the company of others than they would be in a survey, or even worse, on social media. There was seen to be an opportunity in this kind of event for a very wide cross section of the community to have a say, as opposed to phone surveys, which were perceived as biased towards older citizens through use of fixed phone lines, and online methods, which were perceived as biased towards younger citizens (we note these perceptions are not necessarily correct).

Perhaps the single biggest advantage of the forum approach was its ability to provide information to participants, on the basis of which they could form an opinion. It was often felt that Sydney Water, and water generally, were not issues which occupied the minds of people to any great extent. As a result, feedback mechanisms which simply asked for views in the absence of information being provided were thought to be likely to generate superficial outcomes.

> *"This has been good because I didn't know jack shit about Sydney Water before."* - Wollongong

> *"Sydney Water has driven the agenda tonight. Forums should be open to wider items that customers have chosen"* - Chatswood

On the less favourable side, there was a feeling that some types of people in the community may not be able to give up four hours of their time to attend a forum, leading to a slight potential bias. The only other issue to be raised was in relation to forum content. The suggestion was made that participants could choose the issues to discuss a bit more in the future.

Online forums were recognised as being a much less expensive method, but were often thought to be ineffective. The biggest problem was seen as a potential lack of participation, with many feeling that Sydney Water was not an interesting enough topic to inspire involvement.

> *"Online feedback can be problematic. Things can snowball and get out of control. You can write anything online anonymously."* - Wollongong

Surveys

There was quite widespread rejection of the telephone survey approach. Many people claimed that they were tired of being called and some associated this kind of unsolicited phoning with potential scams. It was further suggested that many people do not answer their phones; that those who do are mostly older; and that many households do not have a fixed line phone (participants assumed that phone surveys would utilise fixed line numbers).

> *"I don't like telephone surveys; they are intrusive of my time; I always think of scams."* - Wollongong

Online surveys enjoyed a slightly more positive perception, although not to the extent of being a preferred option by residents. Many participants claimed that the majority would be unlikely to bother completing online surveys and that they would need to be very short.

Some business customers did see online surveys as a preferred option. However, others preferred a face-to-face approach as they did not think they would respond to an online survey.

Group discussions

The group discussion approach was usually regarded as appropriate for gaining feedback on more specific issues. It was felt that this method allowed for (albeit small) representative samples to be covered and for appropriate subjects to be investigated in some depth. It was also seen as a method within which information could be provided to those involved, which was thought to be potentially important in the case of Sydney Water.

Those who had taken part in the group discussions (LOTE, SMEs and financial hardship) thought that this method was a good way of involving customers in decision making. The LOTE groups stated that they were unlikely to be part of Sydney Water's consultation in any other format, unless other media such as surveys were translated into other languages.

Social media

A few younger participants saw social media options as an appropriate method for garnering community feedback. For the majority however, this option was soundly rejected. It was perceived that the approach would be heavily biased towards younger people, and those with a complaint or gripe they wanted to express. There was also a concern over the credibility of content on social media, with some suggesting that people often put up quick unconsidered comments which they would be unlikely to offer in a public forum where they were in the presence of other people.

> *"Not social media because people talk crap and say things they wouldn't say to other people's faces"* - Penrith

Advisory panels

The idea of advisory panels met with mixed responses. Whilst some people thought they could deliver benefits, most were suspicious. There was a consistent issue over how the group would be selected. If it was in any way biased in favour of a particular group of consumers, or a particular point of view, then its outcomes were seen as having little value. There was a feeling that a diverse range of representatives with strong individual views may have difficulty coming to an agreement on some issues.

Another area of concern was the potential lack of transparency in this kind of engagement method. The question was asked as to how the general public would know what was going on in the advisory group meetings. It was claimed that there would need to be open and honest feedback distributed widely. The problem remained however that it was imagined that many people in the broader community would not be sufficiently interested to bother taking notice of this feedback even if it was provided.

Customer Council

Initial thoughts

No one within this series of forums or discussion groups had previously heard of the Sydney Water Customer Council.

At first sight, the Council seemed like a good idea to all. It appeared to have a broad representation of different interest groups and it was imagined that the diverse array of interests represented would result in a worthwhile debate on key issues. It was suggested that ordinary customers would probably be reluctant to sit on this kind of council, so having specialists to represent them was preferable.

Some people saw the Council as a good 'middle tier' of feedback and consultation between Sydney Water executives themselves, and end customers. This was often felt to be worthwhile, especially in providing representation for minority and vulnerable segments of the community who may otherwise have difficulty being heard.

"It is a good idea. Government reaching out to private customers. Makes them more accountable" – SME group

Given that no one was aware of the Council or its deliberations, there was a feeling that it would be good to publicise the Council outcomes so that the community could see what was being achieved. Assuming that interest would be only marginal among the broad community, it was thought that perhaps a Council website may be appropriate to allow those who were interested to remain abreast of proceedings.

The Arabic speaking group suggested that the Council needs to be more widely promoted to LOTE communities, for example, through language specific community groups or ethnic media such as community radio, print media and SBS.

The Customer Council as a means of eliciting customer views

As a means of gaining any insight into the views of customers however, the Council was seen as unrepresentative. It was commonly suggested that the regular customer was not represented by any of the groups on the Council. Participants often reported that they had never heard of many of these organisations, and that certainly none of them stood for the ordinary community member.

"I don't recognise these community groups and I don't feel that they represent me" - Penrith

"It's OK if it's used in conjunction with other things like forums." - Wollongong

In that sense, it was hard for most people to see how an array of seemingly narrowly focussed special interest groups could be a reasonable means of eliciting the views of the broader community. Most preferred to think that the

Council may have a valid role in representing a range of specific interests, but that other methods would need to be employed to uncover the views of mainstream customers.

Representation on the Customer Council

There was a widespread feeling among participants that the makeup of the Council failed to actually represent the mainstream community. Most could not relate personally to any of the current member organisations and could not see how their own views would be taken into account.

> *"But it says Customer Council, where are the actual customers?"* - Wollongong

> *"It seems like a political forum - people pushing their own barrows. It's not for the good of the greater community"* - Penrith

Quite a few even felt that the composition of the Council looked like an attempt at 'political correctness'. To some it looked as if the Council existed to make it seem as if all relevant community interests were being represented, in a 'tick the box' sense.

The Mandarin speaking group noted that real estate agents and strata management companies should work closely with Sydney Water to communicate and inform residents who are under their service care. They suggested that customer representatives, someone from Fair Trading and representatives from the commercial sector including real estate agents should be included. The Arabic speaking group suggested the Sydney Business Chamber, the Department of Consumer Affairs, the Ombudsman and the Australian Council of Social Services.

Method of selection of Council members

Participants had some difficulty in arriving at the best method for selecting Council members. This stemmed from the disconnect between what the Council was purporting to be for, compared with what people saw it as. In the sense that most saw it as a kind of 'mid-tier' consultation group to represent special and minority interests, they felt that an independent organisation such as IPART was very appropriate to ensure a balanced representation.

If the Council was to be a genuine 'Customer' Council in the broad meaning of the term, then it was felt that it would need to include a representation of the mainstream population. How those 'ordinary' customer representatives were to be selected then caused a degree of uncertainty. Some suggested a kind of ballot amongst interested volunteers, others had no clear opinion about the method of selection.

The key observation made by participants in this area however, was probably that a council of this type could never be the best way of eliciting customer views. Many seemed to feel that the Council should be left as is, possibly with a different name, and that mass customer views should be obtained by more traditional and robust methods such as forums, surveys and group discussions.

A Recruitment screeners

Screener for deliberative forums

Project Name:	Sydney Water CIPA
Client:	Sydney Water
Woolcott Job Number:	9593-DE
Sample Description:	N=100 per forum (to obtain approx. n=80)
Date:	February 2018

***INFORMATION ABOUT SYDNEY WATER FOR INTERVIEWERS**
Sydney Water are responsible for providing running water to your property and for removing wastewater, as well as minimising the impact on the environment from these activities. They are responsible for the entire Greater Sydney area, as well as the Illawarra and Blue Mountains. They are 100% owned by the NSW state government.

FORUM DETAILS

Wednesday 28th February 5.30-9.00pm	**Penrith** Penrith Panthers 123 Mulgoa Rd, Penrith NSW 2750	Monday 12th March 5.30-9.00pm	**Bankstown** Bankstown Sports Club 8 Greenfield Pde, Bankstown NSW 2200
Monday 5th March 5.30-9.00pm	**Chatswood** The Chatswood Club 11 Help St, Chatswood NSW 2067	Thursday 15th March 5.30-9.00pm	**Parramatta** Parramatta RSL Corner of O'Connell St & Macquarie St, Parramatta NSW 2150
Wednesday 7th March 5.30-9.00pm	**Wollongong** Win Stadium 46 Harbour St, Wollongong NSW 2500	Monday 19th March 5.30-9.00pm	**CBD** City Tatts Club Pitt Street NSW 2000

Good morning/ afternoon, my name is _____ from Woolcott Research and I'm calling on behalf of Sydney Water [**PROVIDE EXTRA INFO IF NEEDED***]. The reason for my call is that they are holding a number of community forums and we are inviting a random selection of people to register their interest in taking part.

The purpose of the forum is for Sydney Water to find out what you think of their services, what's most important to you and what changes they could make to what they do and how they operate to better reflect your views and preferences.

You do not need to know anything at all about water or wastewater services to take part.

The forum in your area is being held on [insert date from above] from 5.30-9.00pm in [insert location above]. Up to 80 community members will take part.

Tea and coffee will be provided, with a light dinner served midway through the forum. You will be given $100 at the event to compensate you for your time and to cover any expenses.

1. Would you be interested in participating?

   Yes 1
   No 2 – **THANK AND TERMINATE**

Thank you. I will just need to ask you a few questions to ensure we get a good cross-section of participants. So firstly…

2. Do you, or any immediate members of your family, work for Sydney Water, any other water or wastewater utility company, IPART (the Independent Pricing and Regulatory Tribunal), a water related role with NSW Health* or NSW Environment Protection Authority?

*** NOTE TO INTERVIEWERS: doctors, nurses and other health practitioners <u>are</u> to be accepted in the forums**

   Yes 1 – **TERMINATE**
   No 2

3. Record gender: **CHECK QUOTAs**

   Male 1
   Female 2
   Non-gender specific 3

4. Can you please tell me your age? _____ **CHECK QUOTAS**

   TERMINATE IF UNDER 18

   IF REFUSED, TRY TO GET AGE BRACKET:
   Can you please tell me which of the following age groups you fall into? **READ OUT**

   Under 18 1 **TERMINATE**
   18-24 2
   25-34 3
   35-44 4
   45-54 5
   55-64 6

65+ 7

5. Is the place you live in: **READ OUT. CHECK QUOTAS**

Owned outright or with a mortgage	1
Being rented or occupied rent-free	2
Other (please specify)	3

6. Do you speak a language other than English at home? **CHECK QUOTAS**

No, English only	1	**SKIP TO Q8**
Yes	2	**ASK Q7**

7. What is the main language spoken at home other than English? **DNRO**

Arabic	1
Australian Indigenous Languages	2
Cantonese	3
Croatian	4
Dutch	5
French	6
German	7
Greek	8
Hindi	9
Indonesian	10
Italian	11
Japanese	12
Korean	13
Lebanese	14
Macedonian	15
Mandarin	16
Polish	17
Punjabi	18
Serbian	19
Spanish	20
Tagalog (Filipino)	21
Turkish	22
Vietnamese	23
Other (please specify)	24
Prefer not to say	25

8. Are you of Aboriginal or Torres Strait Islander origin?

No	1	
Yes	2	
Prefer not to say	3	**DO NOT OFFER**

9. What is your approximate annual household income? **READ OUT**

Less than $41,600	1
Between $41,600 and $78,000	2
Between $78,000 and $104,000	3

Between $104,000 and $156,000	4	
More than $156,000	5	
Do not wish to answer	6	**DO NOT OFFER**

10. Are you a member of any special interest groups or associations related to water?

Yes (please specify)	1
No	2

Thank you for providing all of this information, you have qualified to participate in the community forum and we look forward to seeing you on the day.

Just to confirm, you have agreed to attend the forum on [insert date above] from 5.30-9.00pm in [insert location above].

Due to space limitations, only people who have completed this questionnaire will be able to attend on the day, and only one person per household

11. Could I please record your full name and contact details so we can send you a letter or email to confirm your attendance and provide all the details of the event?

TITLE: _____
FIRST NAME: _____
SURNAME: _____
CONFIRM PHONE NUMBER: _____
MOBILE NUMBER: _____
1ST LINE ADDRESS: _____
2ND LINE ADDRESS: _____
SUBURB: _____
POSTCODE: _____
EMAIL ADDRESS: _____

INTERVIEWER NOTE: Repeat back all details above to check spelling

12. Would you prefer to be contacted by letter or by email?

Letter	1
Email	2

13. And finally, do you have any special needs to enable you to attend on the day? E.g. accessibility or dietary requirements (due to health, cultural or religious reasons)

_____
_____

Thank you for your time and willingness to attend. We will also give you a phone call in the week leading up to the forum to remind you of the forum and confirm attendance.

If you find you are unable to attend for any reason, please contact Melissa Homann or Liz Sparham on 02 9261 5221 as soon as possible as we will need to find a replacement for you. You can also contact Melissa or Liz if you require any further information about the forums.

Screener for group discussions – financial hardship

Specification:
2 full groups of those in financial hardship (8 per group).

Screener:

Q1. What is your postcode? **CHECK IN SW AREA. IF NOT TERMINATE.**

_____

Q2. Do you currently hold a concession card/low income healthcare card?

Yes	1	
No	2	- TERMINATE
Refused DNRO	3	- TERMINATE

Q3. In the last 12 months, have you had any difficulty paying your utility bills? (e.g. requested an extension of time for payment)

Yes	1	
No	2	- TERMINATE

Q4. Do you, or any immediate members of your family, work for Sydney Water, any other water or wastewater utility company, IPART (the Independent Pricing and Regulatory Tribunal), a water related role with NSW Health or NSW Environment Protection Authority?

Yes	1 – TERMINATE
No	2

Q5. Please select your gender: **(please recruit 50:50 split of males and females)**

Male	1
Female	2

Q6. Please indicate which age group you fall into? **(please aim for 2 in each age category)**

Under 18 years	1	TERMINATE
18-29 years	2	

30-44 years	3
45-64 years	4
65+ years	5

4. Is the place you live in: **(please aim for over half in the group who own outright or with a mortgage)**

Owned outright or with a mortgage	1
Being rented or occupied rent-free	2
Other (please specify)	3

5. Do you speak a language other than English at home or with family?

No, English only	1	SKIP TO Q7
Yes	2	ASK Q6

6. What is the main language spoken at home or with family other than English?

Arabic	1
Australian Indigenous Languages	2
Cantonese	3
Croatian	4
Dutch	5
French	6
German	7
Greek	8
Hindi	9
Indonesian	10
Italian	11
Japanese	12
Korean	13
Lebanese	14
Macedonian	15
Mandarin	16
Polish	17
Punjabi	18
Serbian	19
Spanish	20
Tagalog (Filipino)	21
Turkish	22
Vietnamese	23
Other (please specify)	24
Prefer not to say	25

7. Are you of Aboriginal or Torres Strait Islander origin?

No	1
Yes	2
Prefer not to say	3

8. What is your approximate annual household income before tax?

Less than $41,600	1
Between $41,600 and $78,000	2
Between $78,000 and $104,000	3
Between $104,000 and $156,000	4
More than $156,000	5
Prefer not to say	6

9. Are you a member of any special interest groups or associations related to water?

Yes (please specify)	1
No	2

- Incentive of $80 for taking part, and tea, coffee and light refreshments will be provided.
- Participants do not need to know anything at all about water or wastewater service provision to take part.

Thank you for your time.

Screener for discussion groups – SMEs

2 full groups of Small and Medium Business water and wastewater decision makers. By water decision makers we mean those who would have a role in interacting with SW either if there was a water interruption or wastewater overflow or by paying water bills (8 per group).

Q1. What is the postcode of where your business is located? **CHECK IN SW AREA. IF NOT TERMINATE.**

_____

Q2a. How many employees do you have in your business, by employees we mean full time equivalents other than the proprietor? **Please recruit a mix of sizes**

No employees/sole trader	1	**GO TO Q2b**
1 - 4 employees	2	
5 - 10	3	
11 - 19	4	
20 - 199	5	
200+	6	**TERMINATE**

Q2b. **IF NO EMPLOYEES/SOLE TRADER**: Do you operate your business out of your home/home office?

Yes 1 **TERMINATE**
No 2

Q3. Are you a decision maker for your organisation regarding water supply or wastewater services?

Yes 1
No 2 **TERMINATE**

Q4. Do you, or any immediate members of your family, work for Sydney Water, any other water or wastewater utility company, IPART (the Independent Pricing and Regulatory Tribunal), a water quality related role with NSW Health or NSW Environment Protection Authority?

Yes 1 **TERMINATE**
No 2

Q5. What industry does your business operate within? **PLEASE ENSURE A GOOD MIX OF INDUSTRIES**

Accommodation, cafes and restaurants	1
Agriculture, forestry, fishing and hunting	2
Communication services	3
Construction	4
Cultural and recreational services	5
Education	6
Electricity or gas supply	
Finance and insurance	7
Government administration and defence	8
Health and community services	9
Manufacturing	10
Mining	11
Personal services	12
Property and business services	13
Retail trade	14
Transport and storage	15
Wholesale trade	16
Other (Specify):	17

Q6. Are you?

Male 1
Female 2

Q7. What is your position or title within your organisation?

Owner / Proprietor 1

Senior Management	2
Other employee	3

Q8. How many years has your business been operating?

Less than 1 year	1
1-2 years	2
2-5 years	3
6-10 years	4
More than 10 years	5

Q9. Does your business own or rent/lease its business premises?

Own	1
Rent/lease	2
Other	3

- Incentive of $125 for taking part, and tea, coffee and light refreshments will be provided.
- Participants do not need to know anything at all about water or wastewater service provision to take part.

Thank you for your time.

B Deliberative forum agenda

Project:	Sydney Water CIPA				
Event:	Deliberative forum				
Details:					
Dates:	15 March – Parramatta	**Time:**	5.30-9.00pm	**Duration:**	3.5 hours
Forum outcomes:	• List of 5-8 outcomes that customers value most • Views/preferences/expectations on the types of events or other things that matter to customers, which could be used to measure Sydney Water's performance • The relative inconvenience to customers from various continuity/overflow/pressure events • Levels of support for potential amendments to rebates • Customer views on engagement, including role and composition of Customer Council				

Time	Session details	Responsibility	Materials
3.30pm onwards	**Pre-forum – Room set up** • Organise tables and chairs, check audio visual equipment and set up, check catering, set up registration desk	WR	
5.00-5.30pm	**Meet and greet** • Sign in, provide name labels, direct to tables (all participants will have allocated tables - 8 tables)	WR	Name labels
5.30-5.32pm	**Plenary: Welcome** • Woolcott Research Lead Facilitator to welcome and thank participants for coming. • Introduce opening speaker	WR Lead Facilitator	
5.32-5.35pm	**Plenary: Introduction** • Acknowledgement to Country • Sydney Water to explain reason for engagement and objectives for forum • Description of whole engagement plan and how this forum fits into the whole • Importance of the forum to SW	SW	PP slides
5.35 - 5.40pm	**Plenary: Housekeeping** • Woolcott Research Lead Facilitator to give overview of forum agenda and approach, the	WR Lead Facilitator	PP slides

	key sessions, guidelines and housekeeping. Location of toilets and evacuation in emergency.		
5.40-5.50pm	**Plenary: Keypad polling** *Lead facilitator to introduce keypads and do some warm up questions. Results shown on screen.* PRACTICE QUESTION: Q. How did you travel to the forum today? 1. Car, 2. bus, 3. train, 4. on foot, 5. helicopter, 6. other. Q. How likely would you be to speak positively about Sydney Water to a friend or family member, where 0 is not at all likely and 10 is definitely likely? 0 1 2 3 4 5 6 7 8 9 10 dk How would you rate Sydney Water on the following: Q. Has customers' interests at heart 0 1 2 3 4 5 6 7 8 9 10 dk Q. Listens to customers 0 1 2 3 4 5 6 7 8 9 10 dk Q. Open and honest 0 1 2 3 4 5 6 7 8 9 10 dk Q. How reliable do you think your water and wastewater service is? 1. Very reliable 2. Quite reliable 3. Neither reliable or unreliable 4. Quite unreliable 5. Very unreliable 6. Don't know Q. How would you rate your water and wastewater service in terms of value for money? 1. Very good value for money 2. Quite good value for money 3. Neither good or poor value for money 4. Quite poor value for money 5. Very poor value for money 6. Don't know	WR Lead Facilitator	PP slides and keypads
5.50-5.55pm	**Plenary Presentation: Introduction to Sydney Water** • Video • What SW does and what services it provides	SW	PP Slides Video
5.55-6.20pm	**Table Discussion: ideal water and wastewater service provider (values)** *Ask participants to introduce themselves on tables – first names, where they live.*	WR Table Facilitators	Flipcharts Coloured textas

	• Firstly, what do you think SW does well? • What don't they do as well? What are the things they could improve and how? • Have you had any contact/interaction with SW other than just paying bills? • Have you experienced any 'pain points' in any interactions you have had with SW (including bill paying)? What are they? **Values** • In the future, what do you think would make an ideal water and wastewater service provider? What do you think are the critical things that SW should focus on to ensure customers are satisfied? • Each table to create a 'value tree' on the flipchart **GIVE OUT HANDOUT 1** *A nominated spokesperson at each table is chosen to feedback their table's high level values. Let them know they only have 1 minute each to present so they should be brief and just go through the high level values.*		Handout 1 on example values from electricity
6.20-6.35pm	**Table feedback: Water and wastewater values** • Feedback invited from all tables on their values *Long list is compiled. The list will be condensed and put into themes (by WR) during the forum. These will be put to particpants later and they will be asked to rate them in terms of their importance.*		

6.35-6.45pm	**Plenary: Presentation on measuring service performance**
	
	• Explain that there are regulations about many of the values that they mentioned in the previous discussion.
	• Reliability obviously an important value and we are going to be concentrating on this one for this forum.
	• Pricing will be discussed at the next couple of forums this year (which we will invite them back to)
	• Provide information on different kinds of events e.g. water interruptions, low pressure, overflows etc. *Show pictures or very short videos to illustrate.*
	• Provide information on the current system performance standards in laymans terms:
	  ○ Continuity standard
	  ○ Pressure standard
	  ○ Overflow standard
		SW	PP slides
			Videos water, wastewater

6.45-7.15pm	**Table discussion: Measuring service performance** **Reactions to Service Performance Standards (5mins)** • So you have heard some of things that SW's performance is measured on. • How well do you think the current standards reflect what is important to customers from the last discussion (i.e. values and priorities)? How well do they match the pain points you discussed earlier? Bearing in mind that there are other regulations for some of the other factors.	WR Table Facilitators	Handout

	Experience and levels of inconvenience (5mins)
	• Have you ever experienced a water interruption, low water pressure, wastewater overflow – external or internal? How about any other type of issue with your water or wastewater service?
	• Which of the situations presented would you think are most inconvenient?
	• Which are least inconvenient?
	• Are there other events that are more important to you than what the current standards focus on – for example:
	  ○ Internal wastewater overflows?
	  ○ How Sydney Water notifies you about planned outages?
	
	Time of Day (5mins)
	• Are there particular times of day you feel are more inconvenient to have a water interruption or loss of pressure that significantly affects how you can use water in your house or in the garden?
	• Is it better for SW to start fixing a problem ASAP or delay and fix it at a later time to reduce potential inconvenience to customers?
	• **GIVE OUT HANDOUT 2: Discussion question 1**
	  ○ For example, a water pipe breaks during the night. Your water supply is still on, but there is water running down your street. There is no risk to safety, property or water quality. Fixing the pipe means workers, diggers and trucks making noise in your street. Would you **prefer** Sydney Water to:
	  ▪ Fix the broken pipe as quickly as possible between 11pm – 2am, turning off your water supply for three hours
	  ▪ Wait to fix the pipe, turning off your water supply for three hours after 9am the next morning
	
	Discussion question 2:
	  ○ Would it make any difference if the water pipe breaks at 7am or at 7pm? Would you **prefer** Sydney Water to:
	  ▪ Fix the broken pipe as quickly as possible, which would mean turning off your water for three hours during peak times
	  ▪ Wait to fix the pipe until later, which would mean turning off your water supply for three hours at 10am later that day or the next day
	
	Single vs repeat events (5mins)
	• How does experiencing a single event compare with experiencing multiple events? i.e. should SW be trying to ensure that the smallest number of customers possible experience repeat events?		

	Discussion question 3: • You are at home and suddenly you are without water for three hours during peak time. You had not been notified of the interruption as Sydney Water are making emergency repairs. How would you feel about Sydney Water? • If this same event happened to you three times in the one year, how would you feel the third time it happened compared to the first time? **Discussion question 4:** • You have a wastewater overflow onto your garden or driveway caused by a blockage in Sydney Water's system. How do you feel about Sydney Water? • If this same event happened to you three times in the one year, how would you feel the third time it happened compared to the first time? **Communication and notice period (5 mins)** • During water interruptions, how important do you think it would be for Sydney Water to: o communicate what's happening during the interruption o communicate the likely time when the issue will be fixed **Discussion question 5:** • **For example,** which of the following daytime unplanned events would you **prefer**? 1. A water interruption that lasts for four hours but Sydney Water communicates the reason for the interruption and the estimated time that water will come back on during it. 2. A water interruption that lasts for two hours but there is no communication from Sydney Water during it. • During planned water interruptions, how much notice do you think customers should be given? • Does this vary depending on the time of day of the interruption (e.g. 7am, noon, 7pm, midnight) or duration of the interruption (1, 3, 6 hours)? • How would you like to be given notice for planned interruptions? e.g. email, letter, SMS, other. • Does this change how much notice is needed? Eg Would you be happy with a shorter time period for SMS notification (eg 4 hours)? **Customer service (5mins)** • How important is customer service overall, compared to issues like your water supply being turned off? What are the most important aspects of customer service? E.g. o Wide choice of communication channels o Being able to quickly speak with a person over the phone o Your problem is fixed quickly o SW keep you up-to-date while we're fixing your problem		

	○ Staff being polite and friendly ○ Staff being knowledgeable ○ Following up for feedback on the process ○ Complaints resolved quickly ○ Complaints resolved on first contact		
7.15-7.35pm	**DINNER BREAK** ***WR to collate values for polling in last session.*** *Facilitators to lay out rebates events and put 10 tokens on each sheet (in preparation for the token exercise)*		
7.35-7.45pm	**Plenary: Keypad polling (measuring service performance)** Q. What would be the best time on a weekday for a three-hour water interruption for your household? Fixing the interruption would involve diggers and trucks making noise in your street. 1. Some time between 5am-9am 2. Some time between 9am-3pm 3. Some time between 3pm-6pm 4. Some time between 6pm-11pm 5. Some time between 11pm-5am Q. What would be the worst time on a weekday for a three-hour water interruption in your household? Fixing the interruption would involve diggers and trucks making noise in your street. 1. Some time between 5am-9am 2. Some time between 9am-3pm 3. Some time between 3pm-6pm 4. Some time between 6pm-11pm 5. Some time between 11pm-5am Q. A water pipe breaks during the night. Your water supply is still on, but there is water running down your street. There is no risk to safety, property or water quality. Fixing the pipe means workers, diggers and trucks making noise in your street. Would you prefer Sydney Water to: 1. Fix the broken pipe as quickly as possible between 11pm – 2am, turning off your water supply for three hours 2. Wait to fix the pipe, turning off your water supply for three hours after 9am the next morning Q. If the same scenario happened as above but the water pipe breaks at 7am or 7pm (i.e. peak time). Would you prefer Sydney Water to: 1. Fix the broken pipe as quickly as possible, which would mean turning off your water for three hours during peak times 2. Wait to fix the pipe until later, which would mean turning off your water supply for three hours at 10am later that day or the next day Q. You are at home and suddenly you are without water for three hours during peak time. You had not been notified of the interruption as Sydney Water are making emergency repairs. How do you feel about Sydney Water: 1. Extremely unhappy	WR Lead Facilitator	PP slides and keypads

	2. Very unhappy 3. Quite unhappy 4. Not unhappy 5. Don't know Q. If this same event happened to you three times in the one year, how would you feel the third time it happened compared to the first time? 1. I would feel much more unhappy 2. I would feel a little more unhappy 3. I would feel the same 4. Don't know Q. You have a wastewater overflow onto your garden or driveway caused by a blockage in Sydney Water's system. How do you feel about Sydney Water? 1. Extremely unhappy 2. Very unhappy 3. Quite unhappy 4. Not unhappy 5. Don't know Q. If you had a wastewater overflow onto your garden or driveway caused by a blockage in Sydney Water's system three times in the one year, how would you feel the third time it happened compared to the first time? 1. I would feel much more unhappy 2. I would feel a little more unhappy 3. I would feel the same 4. Don't know Q Which of the following daytime events would you **prefer**? 1. A water interruption that lasts for four hours but Sydney Water communicates the reason for it and the estimated time that water will come back on during it. 2. A water interruption that lasts for two hour but there is no communication from Sydney Water during it. Q. How would you most like to be given notice of a planned water interruption? MR 1. Letter 2. Email 3. SMS 4. App push notification 5. Other		
7.45-7.55pm	**Plenary: Presentation on Rebates** • Information on types of events where customers are given rebates. • Make clear that compensation for damage is separate to this – rebates are not to cover this. • Exclude detail of exact rebate amount for each event to avoid anchoring participant values but provide overall range e.g.$30-$60 for single events, $100-$500 for repeat events.	SW	PP slides

	• Highlight the issues such as automatic vs application and whether rebates should go to renters or owners.		
7.55-8.20pm	**Table discussion: Rebates** • Not all Australian water utilities pay rebates. Would you expect to get a rebate for water interruptions, low pressure or overflows? Why? What about for dirty water or boil water events? Why? • What do you think the rebate is for? E.g. a discount because the service is not available or compensation for inconvenience or both? • If they do expect a rebate, should rebates be paid automatically or should they be paid on application? E.g. overnight events - should they be automatic (everyone gets them) or on application (only people who perhaps experience more inconvenience e.g. shift workers)? • Who should rebates be paid to? How important is it to find ways of providing rebates to renters if they are not already receiving them? • **BUDGET ALLOCATION EXERCISE:** to be completed as a table group first and then individual sheets. Each table is given 100 tokens and 10 events. As a **group** they have to allocate the 100 tokens to the 10 events according to level of rebate each event should attract. Discuss why they have allocated the way they have. Give the spokesperson the group allocation sheet. Explain that the spokesperson will input the number of tokens the group has allocated for each event into the keypad in next polling session. • **GIVE OUT INDIVIDUAL REBATE ALLOCATION SHEETS**. Ask each participant to allocate the tokens between the events (they can put the same allocation as the group or they can change it)	WR Table Facilitators	Tokens A4 sheets with each of 10 events Group allocation sheet – Handout 3 Handout– individual allocation sheets
8.20-8.30pm	**DESSERT – participants to bring back to tables** ***WR facilitators to give Angus the group token exercise sheet***		
8.30-8.35pm	**Plenary: Keypad polling (rebates)** Q. In general, would you expect to receive a rebate for service failures such as water interruptions, low water pressure or wastewater overflows? 1. Yes 2. No 3. Don't know Q. If rebates are paid, should customers automatically receive them, or should they be paid only on application, ie. only paid to customers who apply because they are inconvenienced by the interruption? 1. Automatic to everyone 2. Application only, to those most inconvenienced 3. Don't know	WR Lead Facilitator	PP slides and keypads

	Q. How important is it to find ways of providing rebates to renters? 1. Very important 2. Quite important 3. Not that important 4. Not important at all 5. Don't know **Show the group token exercise results on screen.**		
8.33-8.35pm	**Presentation: Customer Representation** • Involving customers in our decision making is very important to SW. • Methods that organisations use. • Ask for their views on best way of involving	SW	
8.35-8.50pm	**Table discussion: Customer Representation** • What is the best way for people who live or work in the SW area to be involved in Sydney Water's decision making? E.g. o Directly in face-to-face forums, focus groups o Online surveys, forums o Through advisory groups, with representatives from community organisations • Did you know that SW has a Customer Council? **HANDOUT 4: information on CC** • What are your initial thoughts on the Customer Council? • What do you think of the Customer Council as a way to get customers' views on issues? A good way or not? • Who do you think should be involved in the Customer Council - what do you think of the current membership? Does it represent the views of those who live or work in Greater Sydney or are there any gaps? • Who do you think should pick the members of the Customer Council?	WR Table Facilitators	Handout 4
8.50-8.55pm	**Plenary: Keypad polling (final)** *Using the list of values compiled from the initial discussion session and the keypads, participants will be asked to rank the values in terms of their importance. Lead facilitator guides the polling process.* Q. Please think back to the beginning of the forum and the values that you thought were important for a water and wastewater service provider to focus on in the future. Please choose the top three values to you in order, i.e. choose the most important one first, then the second most important one, then the third. (show list of values and participants select their top 3) Now I am going to ask the same question as I did at the beginning to see if there has been any changes in perceptions.	WR Lead Facilitator	PP slides and keypads

	Q. How likely would you be to speak positively about Sydney Water to a friend or family member, where 0 is not at all likely and 10 is definitely likely? 0 1 2 3 4 5 6 7 8 9 10 dk		
8.55-9.00pm	**Summing up, thank you** • *Sydney Water closing remarks* – what Sydney Water will take from today and confirmation of next steps.	SW	
9.00pm	**CLOSE** *Woolcott Research Lead Facilitator* – thanks and reminder to fill in end of session questionnaire on tables	WR All	End of session q Incentive s and signing sheet

C Forum handout 1 – value tree

Handout 1: Values in relation to water and wastewater management

In this session we would like you as a group to develop a **values tree for water and wastewater management**.

The first part of the tree will be your values in relation to future water and wastewater management. These could be related to a number of different factors such as social, environmental, economic, cultural or aesthetic factors.

Below we have given some examples for the electricity industry. For example, the values people wish for in relation to the management of the electricity network could be safety, reliability, affordability, good appearance and energy efficiency.

Then the next stage is determining the branches from these values (these are the key thoughts linked to each value).

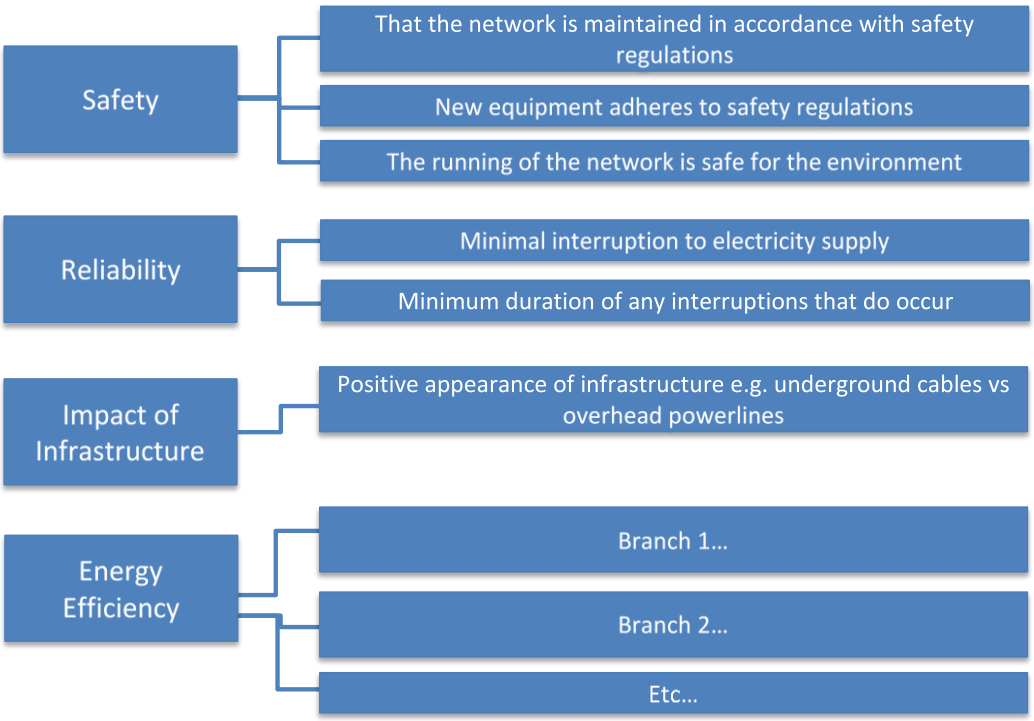
So again, for the electricity network, for the value of safety, there could be three different branches – safe maintenance, safe new equipment and safe running of the network for the environment.

The diagram overleaf provides an example for a values tree for the electricity network.[1]

So for water, what would your values tree look like? What are the most important factors that people will be looking for in the future for water and wastewater management?

[1] Please note this is purely hypothetical and does not reflect the community's views in any way.

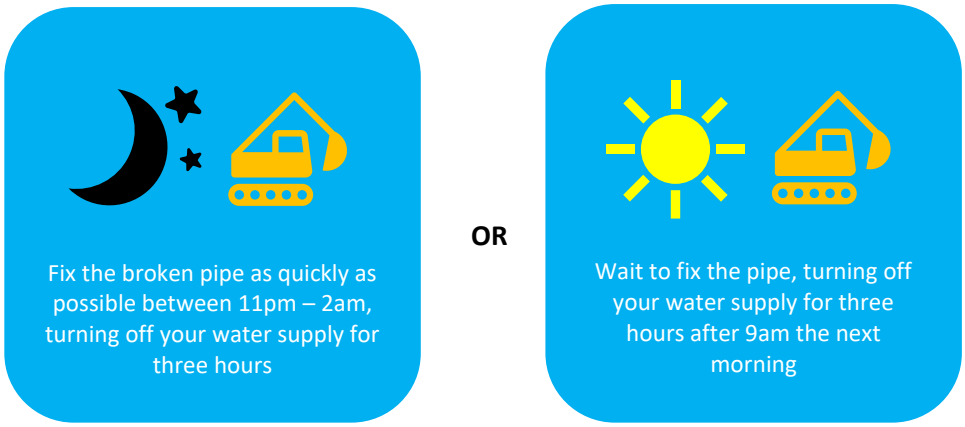
Example values tree for the electricity network



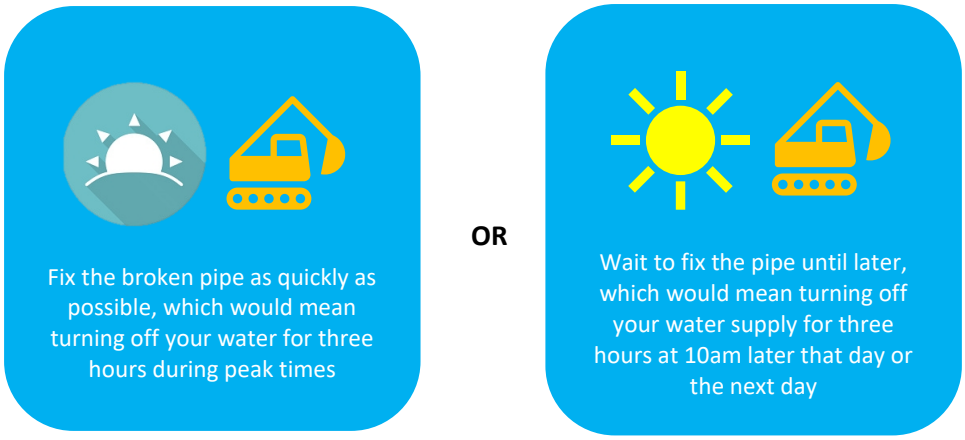
D Forum handout 2 – service comparisons

Handout 2: Service comparisons

Discussion question 1: A water pipe breaks during the night. Your water supply is still on, but there is water running down your street. There is no risk to safety, property or water quality. Fixing the pipe means workers, diggers and trucks making noise in your street. Would you **prefer** Sydney Water to:



Discussion question 2: If the same scenario happened as above but the water pipe breaks at 7am or 7pm (i.e. peak time). Would you **prefer** Sydney Water to:



Discussion question 3:

You are at home and suddenly you are without water for **three hours** during peak time. You had not been notified of the interruption as Sydney Water are making emergency repairs. How would you feel about Sydney Water?

If this same event happened to you **three times in the one year**, how would you feel the **third time** it happened compared to the **first time**?

Discussion question 4:

You have a wastewater overflow onto your garden or driveway caused by a blockage in Sydney Water's system. How do you feel about Sydney Water?

If this same event happened to you **three times in the one year**, how would you feel the **third time** it happened compared to the **first time.**

Discussion question 5: Which of the following daytime events **would you prefer**?

A water interruption that lasts for four hours but Sydney Water communicates the reason for it and the estimated time that water will come back on during it

OR

A water interruption that lasts for two hours but there is no communication from Sydney Water during it

E Forum handout 3 – token exercise

Handout 3: Table budget allocation exercise

Event	Tokens allocated
A. Your water supply is turned off for five hours during the day or evening (5am–11pm). You were given 48 hours' notice.	
B. Your water supply is turned off for five hours during the night (11pm–5am). You were given 48 hours' notice.	
C. Your water supply is turned off for emergency repairs for five hours at any time of day. You did not receive any notice.	
D. You have a water pressure failure and only a trickle of water runs from your second floor shower, lasting 1 hour	
E. You have a water pressure failure and only a trickle of water runs from your second floor shower, lasting 15 minutes	
F. A wastewater overflow occurs at your property	
G. The water running from your tap is discoloured for a period of two hours during the day or evening	
H. NSW Health issues a 'boil water alert' for 2 days, indicating the water is/may be contaminated (e.g. by bacteria)	
I. Your water supply is turned off three times (without notice) in a 12-month period, each time lasting for about three hours at any time of day	
J. Two wastewater overflows occur at your property in a 12-month period	

Each table will be given 100 tokens. As a group, please allocate the 100 tokens to the 10 events according to the level of rebate each event should attract. As the table spokesperson please write the final allocation next to each event above and you will be asked to put these into the keypad. Please make sure they add up to 100.

Discuss the reasons for your chosen allocation as a group.

F Forum handout 4 – Customer Council

Handout 4: Customer Council

The Customer Council has been established as a requirement of Sydney Water's Operating Licence.

The objectives of the Customer Council are to:

- Provide a forum for effective input and examination by consumer and community groups into policy, planning and service decision-making processes relevant to customers.
- Promote a just, equitable and effective delivery of Sydney Water's services.
- Assist the development of a climate of trust between Sydney Water and its customers by fostering an open and honest approach to Sydney Water's services.
- Provide a forum for facilitating two-way communication between Council members and Sydney Water.
- Provide opportunities for Council members to raise matters on behalf of the representative groups and receive a considered response from Sydney Water.

Current Membership

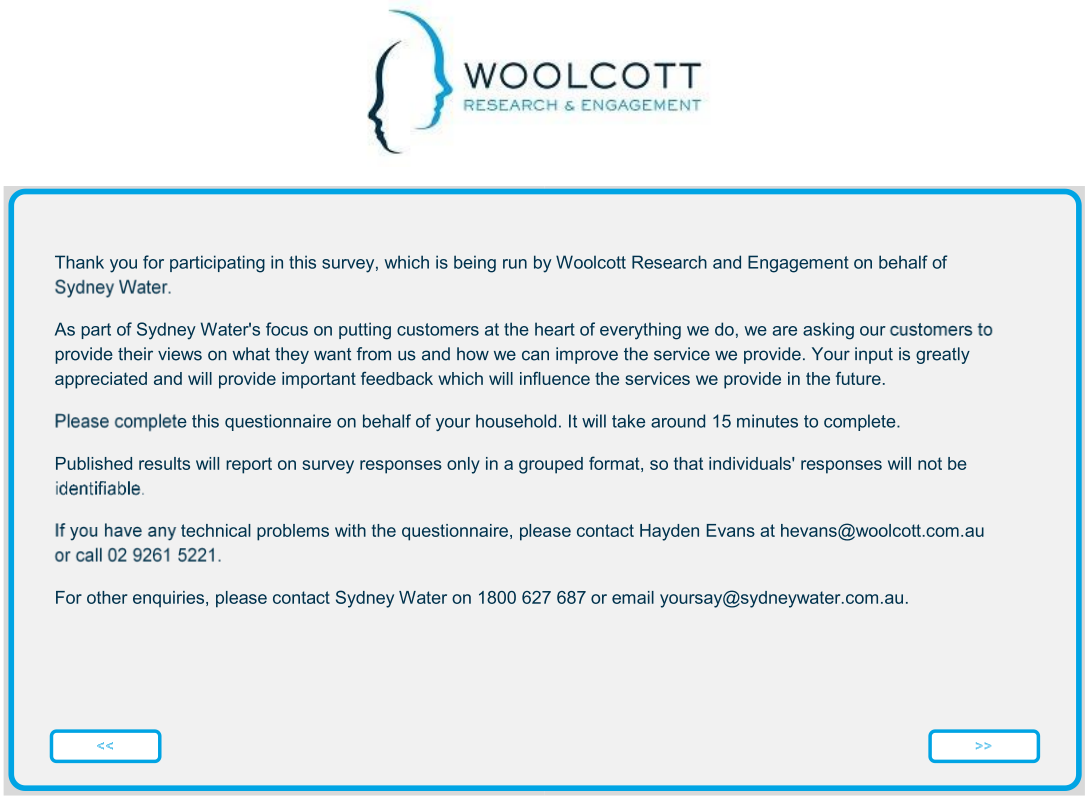
IPART specify the customer segments that need to be represented and SW invites someone from an organisation which would represent that group.

Current members are from the following community and interest groups:

• Council of the Ageing (COTA) • Ethnic Communities Council NSW • Illawarra Forum Inc • Illawarra Local Aboriginal Land Council • Local Government NSW • Multicultural NSW	• Nature Conservation Council NSW • NSW Council of Social Service • People with Disability Australia • Public Interest Advocacy Centre (PIAC) • Sydney Business Chamber • Total Environment Centre • Urban Development Institute of Australia

Meetings are held quarterly, with one per year chaired by a Customer Council member, rather than Sydney Water.

G Survey questionnaire



WOOLCOTT
RESEARCH & ENGAGEMENT

Thank you for participating in this survey, which is being run by Woolcott Research and Engagement on behalf of Sydney Water.

As part of Sydney Water's focus on putting customers at the heart of everything we do, we are asking our customers to provide their views on what they want from us and how we can improve the service we provide. Your input is greatly appreciated and will provide important feedback which will influence the services we provide in the future.

Please complete this questionnaire on behalf of your household. It will take around 15 minutes to complete.

Published results will report on survey responses only in a grouped format, so that individuals' responses will not be identifiable.

If you have any technical problems with the questionnaire, please contact Hayden Evans at hevans@woolcott.com.au or call 02 9261 5221.

For other enquiries, please contact Sydney Water on 1800 627 687 or email yoursay@sydneywater.com.au.

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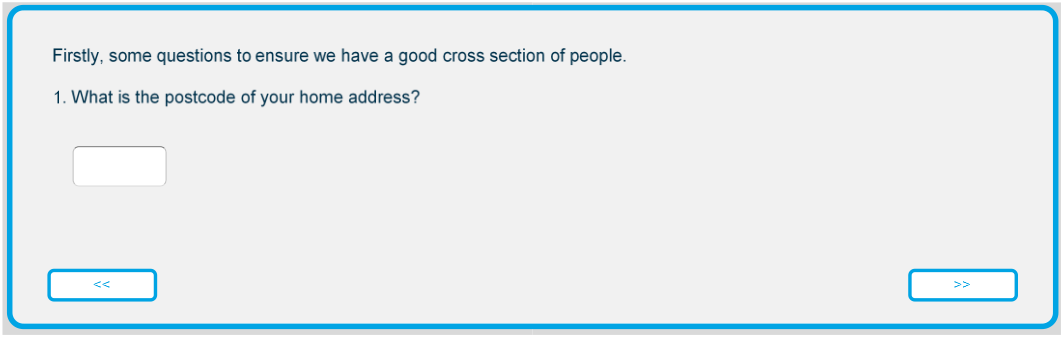
Survey progress: 4%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.



Survey progress: 6%

To view our data collection statement, click here.

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Survey progress: 10%

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If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

Survey progress: 12%

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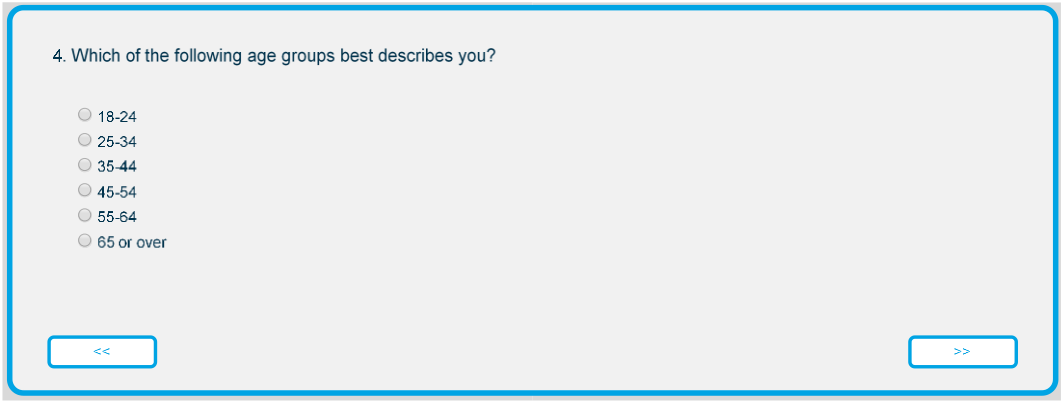

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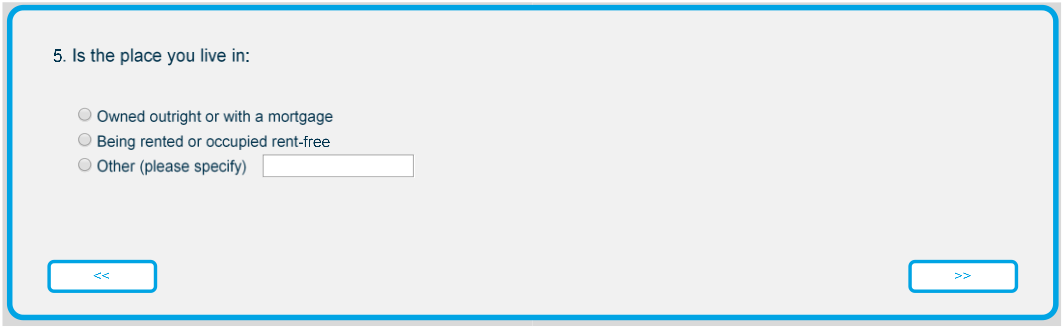

Survey progress: 16%

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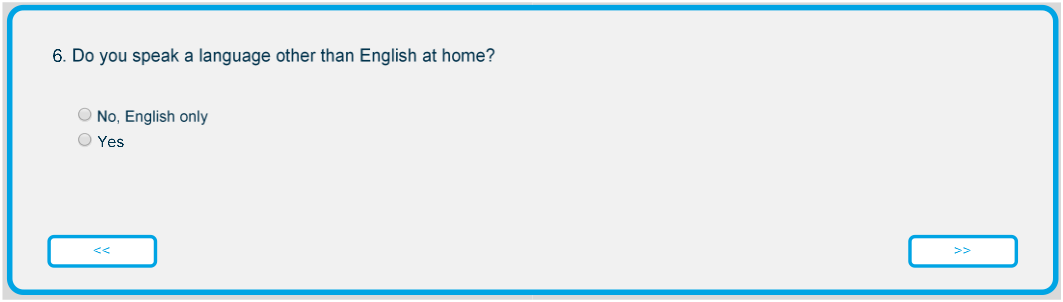

Survey progress: 18%

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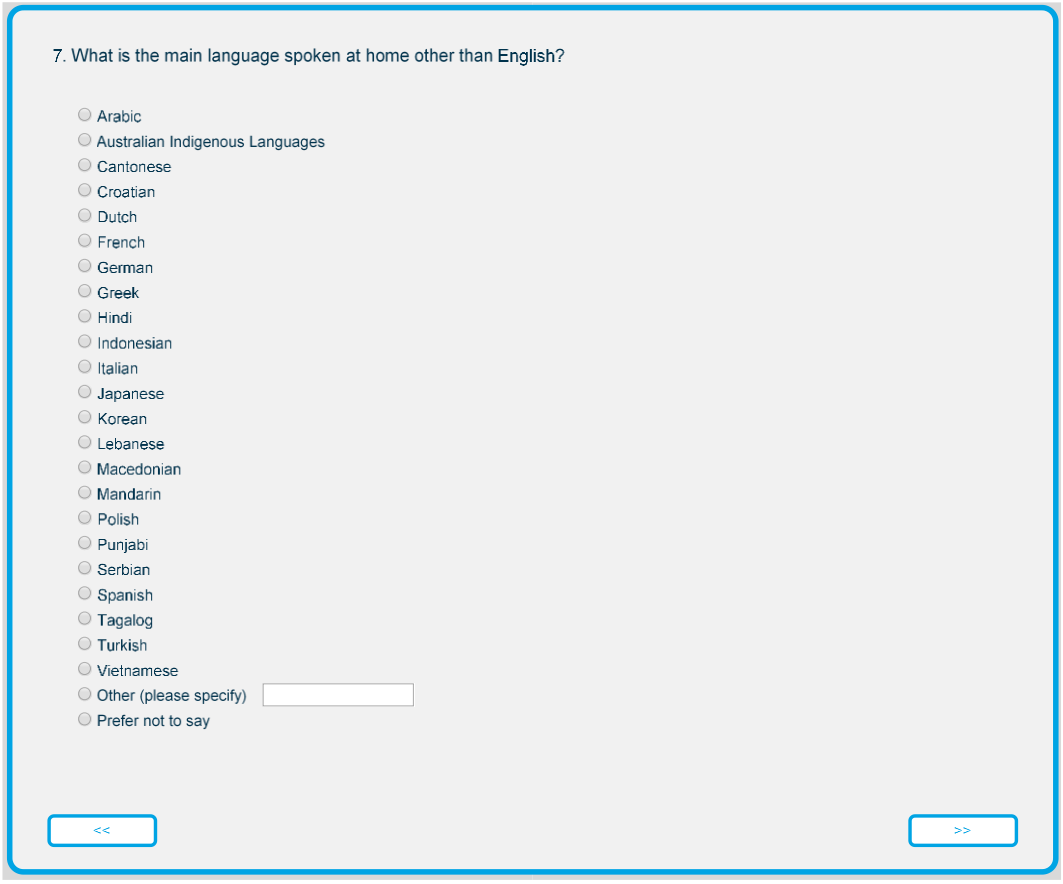

7. What is the main language spoken at home other than English?

- Arabic
- Australian Indigenous Languages
- Cantonese
- Croatian
- Dutch
- French
- German
- Greek
- Hindi
- Indonesian
- Italian
- Japanese
- Korean
- Lebanese
- Macedonian
- Mandarin
- Polish
- Punjabi
- Serbian
- Spanish
- Tagalog
- Turkish
- Vietnamese
- Other (please specify)
- Prefer not to say

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Survey progress: 19%

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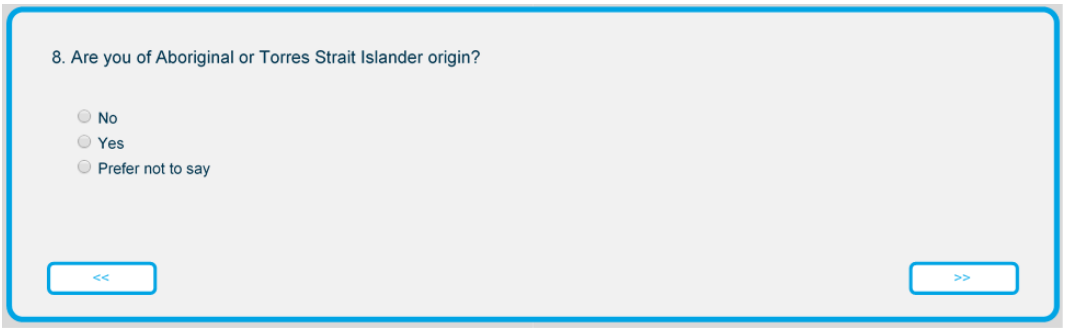

Survey progress: 21%

To view our data collection statement, click here.

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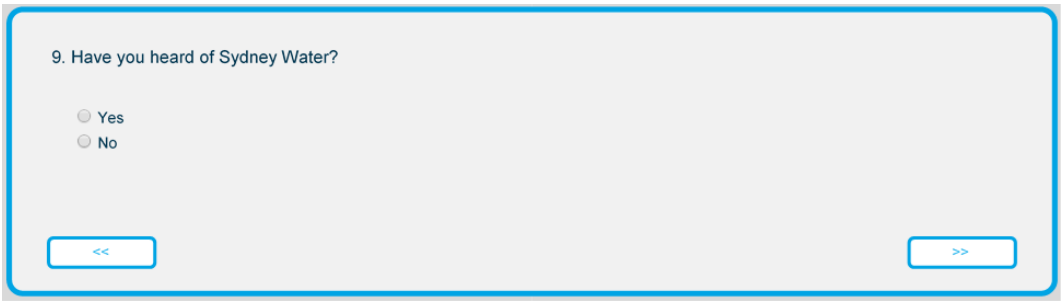
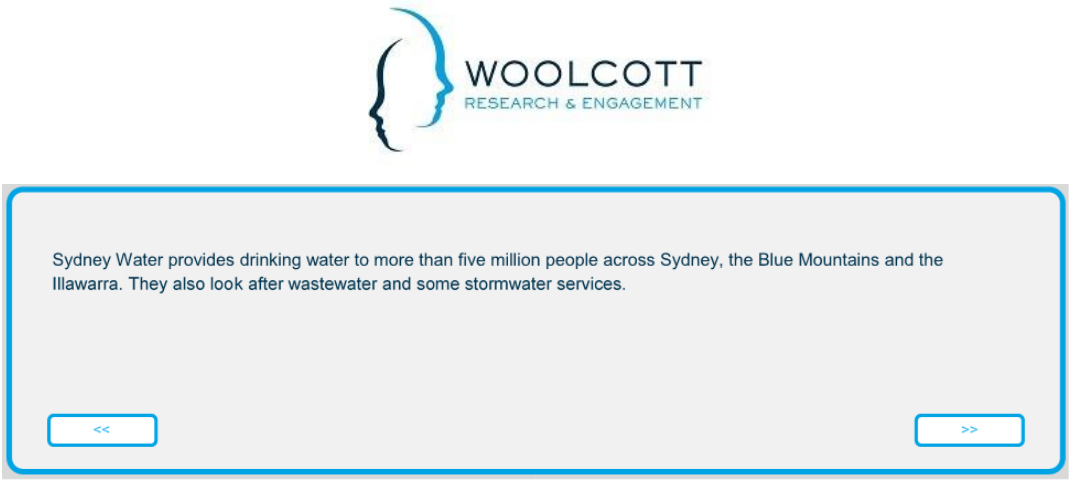


Survey progress: 23%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.



To view our data collection statement, click here.

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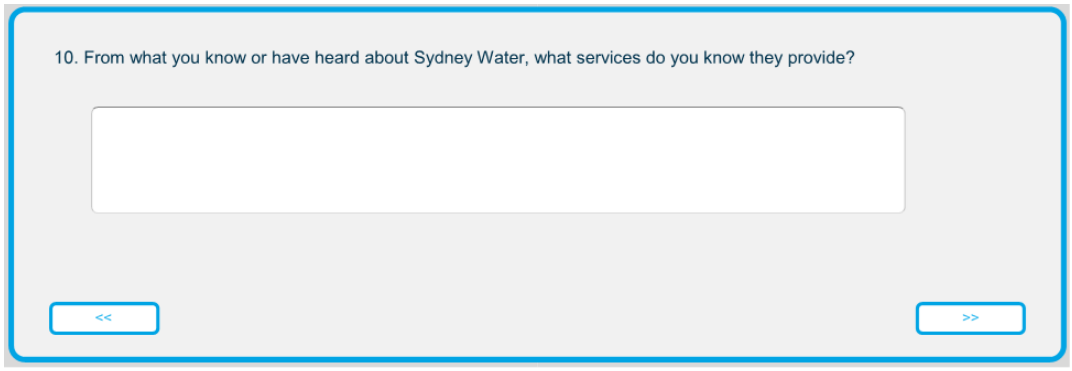

Survey progress: 26%

To view our data collection statement, click here.

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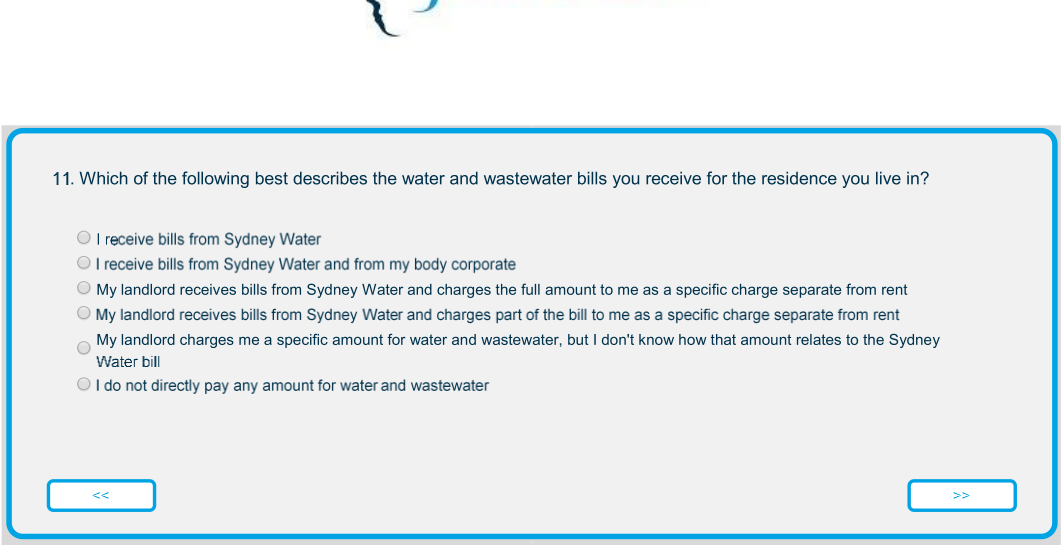

To view our data collection statement, click here.

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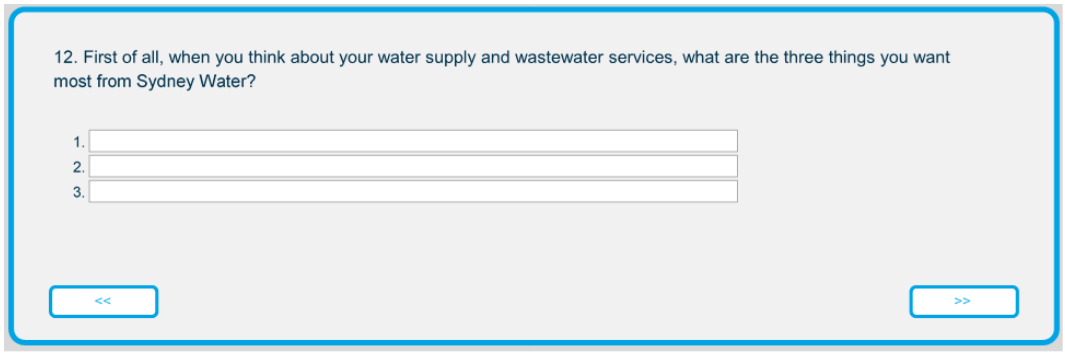

Survey progress: 29%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

13. Below is a list of outcomes other people have said they want from their water and wastewater service provider. Please indicate the five outcomes that are most important to you personally.

- ☐ **Reliable supply** - water interruptions are kept to a minimum.
- ☐ **Reliable wastewater service** - wastewater blockages and overflows are kept to a minimum.
- ☐ **Quick response** to water supply interruptions, leaks and wastewater overflows
- ☐ **Support for customers** during periods of financial hardship
- ☐ **Good customer service and communication** (e.g. first-time issue resolution, notification of interruptions)
- ☐ **Accurate and timely information** (e.g. smart meters, a Sydney Water app)
- ☐ **Protection of the natural environment** (air, landscape/green spaces, waterways and beaches)
- ☐ **Low carbon emissions** - reduction of Sydney Water's carbon footprint by investing in technology that reduces carbon emissions
- ☐ **Community focussed** - Sydney Water supports local communities, for example, by providing water bottle refill stations
- ☐ **Future focussed/innovative solutions**
- ☐ **Transparency/openness/honesty**
- ☐ **Fair/affordable pricing** - equal and affordable access to water and wastewater services. Keeping business costs to a minimum.
- ☐ **Quality drinking water** - provides high-quality drinking water that meets or exceeds the Australian Drinking Water Guidelines.
- ☐ **Water supply security** - uses a variety of water supply options (e.g. desalination, recycled water) to ensure there is always enough water.

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Survey progress: 30%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

Sometimes things go wrong with our services and this can cause inconvenience. For example, you may occasionally experience:

- water supply interruptions
- wastewater overflows
- water pressure failures
- discoloured water, or
- a problem with your bill.

Please read the following descriptions of these events. Afterwards you will be asked a few questions about how inconvenient these events could be for your household.

Water supply interruptions

Sometimes, Sydney Water will need to turn off your mains water supply to work on the water network.

While the water supply is turned off, you will not be able to get water from the taps on your property. For example, you will not be able to:

- pour a glass of drinking water;
- flush the toilet (after it's been flushed once);
- rinse or wash dishes or clothes; or
- have a shower.

Wastewater overflows

Wastewater is the used water that goes down sinks, toilets and drains. When the wastewater system becomes blocked, for example due to tree roots, wastewater can overflow from the manholes that are used to access the sewerage pipes or from a grate in your yard.

In rare cases, wastewater may overflow within a house, for example from the shower drain.

Wastewater is mostly water, but it can contain viruses, bacteria and other organisms that are harmful to humans, animals and the environment. In the event of an overflow you would need to stop using your toilets, sinks and other drains and keep away from the affected area until the blockage has been cleared and the area has been thoroughly cleaned by Sydney Water staff.

Water pressure failure

Sometimes, water pressure in our system can fall due to high demands or a broken pipe. This may result in slow flow of water from your taps. Depending on the location and height of your building, you may notice:

- taking a few minutes to fill a bucket
- only a trickle of water coming from second-floor taps/shower
- not being able to use water in more than one place in the home (e.g. not being able to shower while using the washing machine).

Discoloured water

Occasionally, you may notice changes to the colour of your drinking water. This can happen when we are working on pipes in your area. It can also be caused by sediment in your hot water tank. The water is usually safe and will often return to normal after running the back garden tap for ten minutes. In rare cases it may last for a few hours if we need to send out a repair crew to fix the problem. This usually involves flushing the water pipes.

Contacting us about your bill

Sometimes, you may need to contact us about your bill. If you phone us during a busy period, you may be placed on hold. We will try to resolve your enquiry over the phone, but in some instances, we will need to look into the problem and call you back at a later time.

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Survey progress: 32%

To view our data collection statement, click here.

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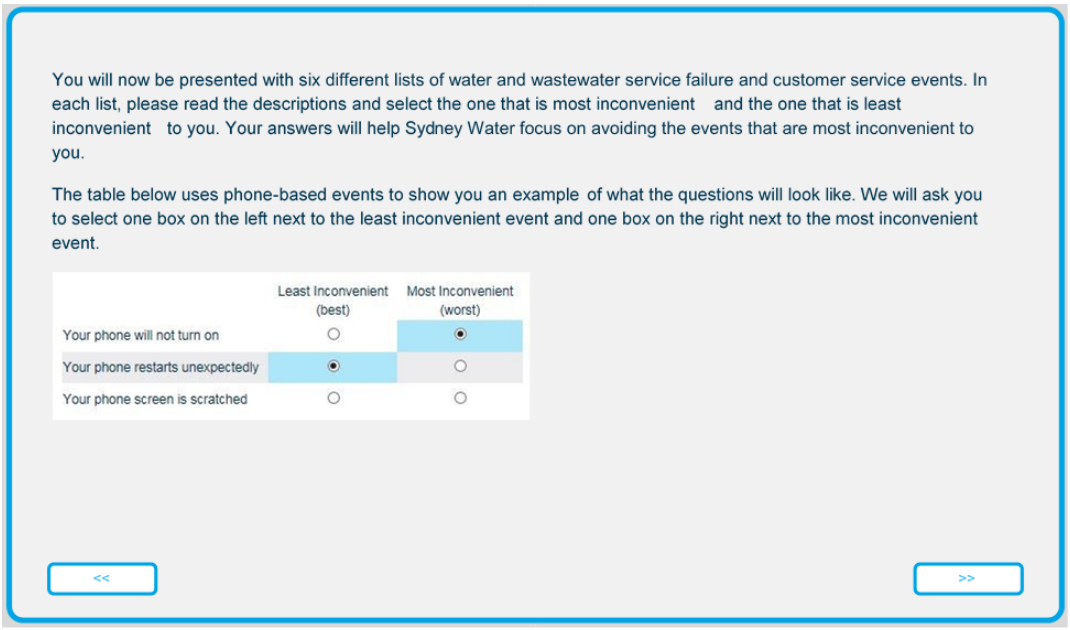

Survey progress: 33%

To view our data collection statement, click here.

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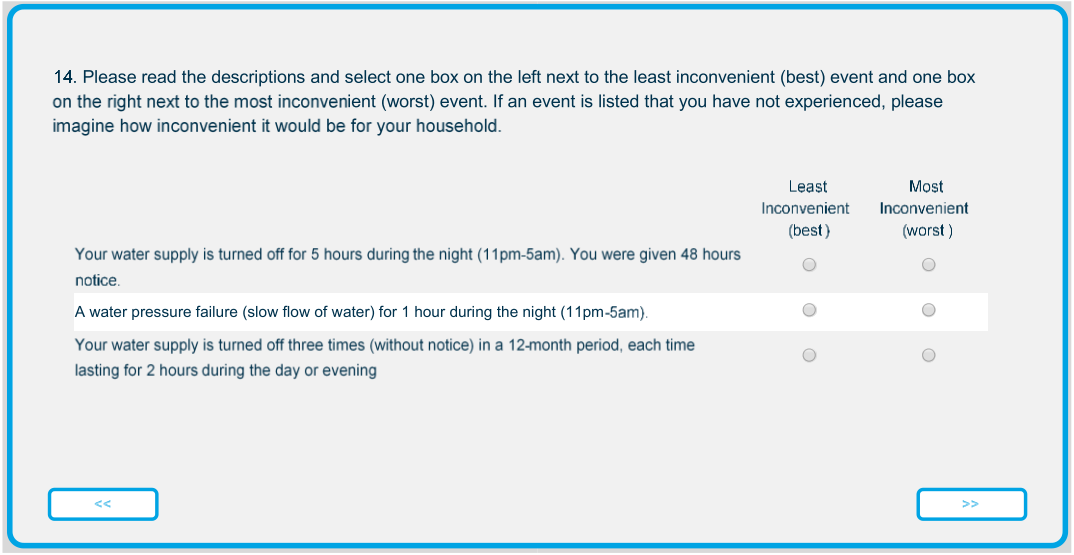


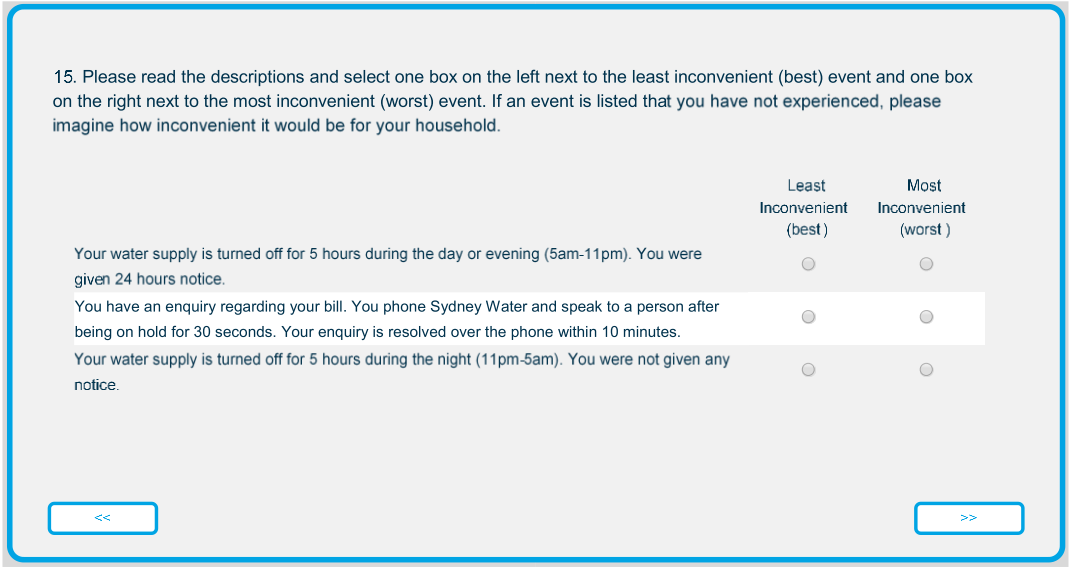
14. Please read the descriptions and select one box on the left next to the least inconvenient (best) event and one box on the right next to the most inconvenient (worst) event. If an event is listed that you have not experienced, please imagine how inconvenient it would be for your household.

	Least Inconvenient (best)	Most Inconvenient (worst)
Your water supply is turned off for 5 hours during the night (11pm-5am). You were given 48 hours notice.	○	○
A water pressure failure (slow flow of water) for 1 hour during the night (11pm-5am).	○	○
Your water supply is turned off three times (without notice) in a 12-month period, each time lasting for 2 hours during the day or evening	○	○

Survey progress: 37%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.



15. Please read the descriptions and select one box on the left next to the least inconvenient (best) event and one box on the right next to the most inconvenient (worst) event. If an event is listed that you have not experienced, please imagine how inconvenient it would be for your household.

	Least Inconvenient (best)	Most Inconvenient (worst)
Your water supply is turned off for 5 hours during the day or evening (5am-11pm). You were given 24 hours notice.	○	○
You have an enquiry regarding your bill. You phone Sydney Water and speak to a person after being on hold for 30 seconds. Your enquiry is resolved over the phone within 10 minutes.	○	○
Your water supply is turned off for 5 hours during the night (11pm-5am). You were not given any notice.	○	○

Survey progress: 39%

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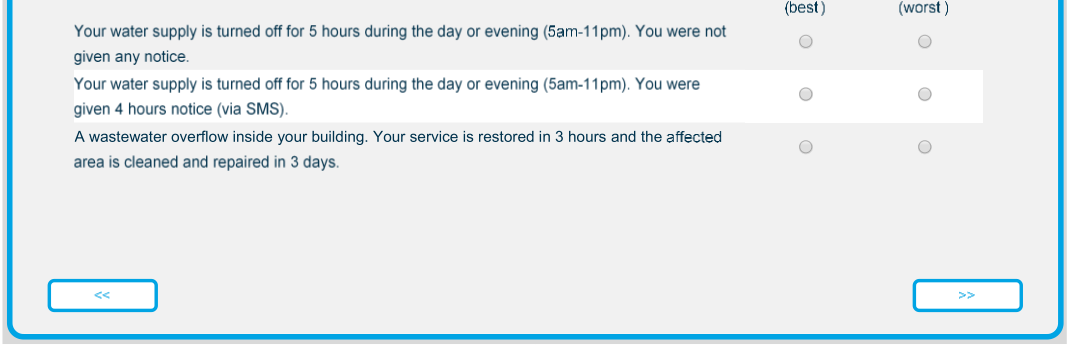

16. Please read the descriptions and select one box on the left next to the least inconvenient (best) event and one box on the right next to the most inconvenient (worst) event. If an event is listed that you have not experienced, please imagine how inconvenient it would be for your household.

	Least Inconvenient (best)	Most Inconvenient (worst)
Your water supply is turned off for 5 hours during the day or evening (5am-11pm). You were not given any notice.	○	○
Your water supply is turned off for 5 hours during the day or evening (5am-11pm). You were given 4 hours notice (via SMS).	○	○
A wastewater overflow inside your building. Your service is restored in 3 hours and the affected area is cleaned and repaired in 3 days.	○	○

Survey progress: 40%

To view our data collection statement, click here.

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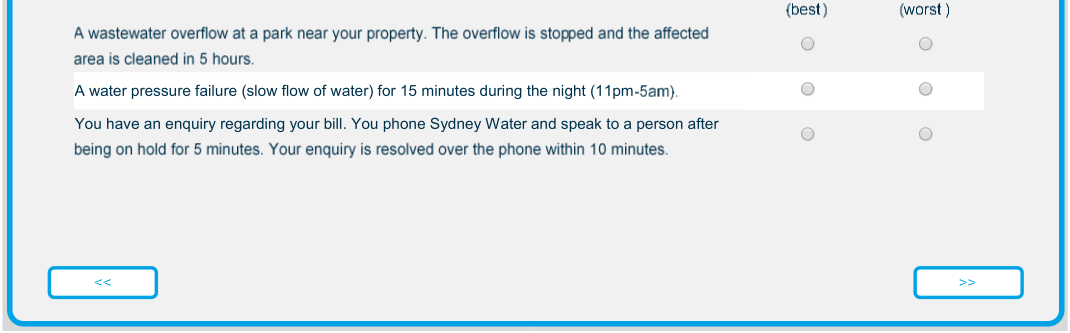

17. Please read the descriptions and select one box on the left next to the least inconvenient (best) event and one box on the right next to the most inconvenient (worst) event. If an event is listed that you have not experienced, please imagine how inconvenient it would be for your household.

	Least Inconvenient (best)	Most Inconvenient (worst)
A wastewater overflow at a park near your property. The overflow is stopped and the affected area is cleaned in 5 hours.	○	○
A water pressure failure (slow flow of water) for 15 minutes during the night (11pm-5am).	○	○
You have an enquiry regarding your bill. You phone Sydney Water and speak to a person after being on hold for 5 minutes. Your enquiry is resolved over the phone within 10 minutes.	○	○

<< >>

Survey progress: 42%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

18. Please read the descriptions and select one box on the left next to the least inconvenient (best) event and one box on the right next to the most inconvenient (worst) event. If an event is listed that you have not experienced, please imagine how inconvenient it would be for your household.

	Least Inconvenient (best)	Most Inconvenient (worst)
You have an enquiry regarding your bill. You phone Sydney Water and speak to a person after being on hold for 5 minutes. Your enquiry is resolved over the phone within 10 minutes.	○	○
You have an enquiry regarding your bill. You phone Sydney Water and speak to a person after being on hold for 30 seconds. Your enquiry is resolved over the phone within 10 minutes.	○	○
Your water supply is turned off for 5 hours during the day or evening (5am-11pm). You were given 4 hours notice (via SMS).	○	○

<< >>

Survey progress: 43%

To view our data collection statement, click here.

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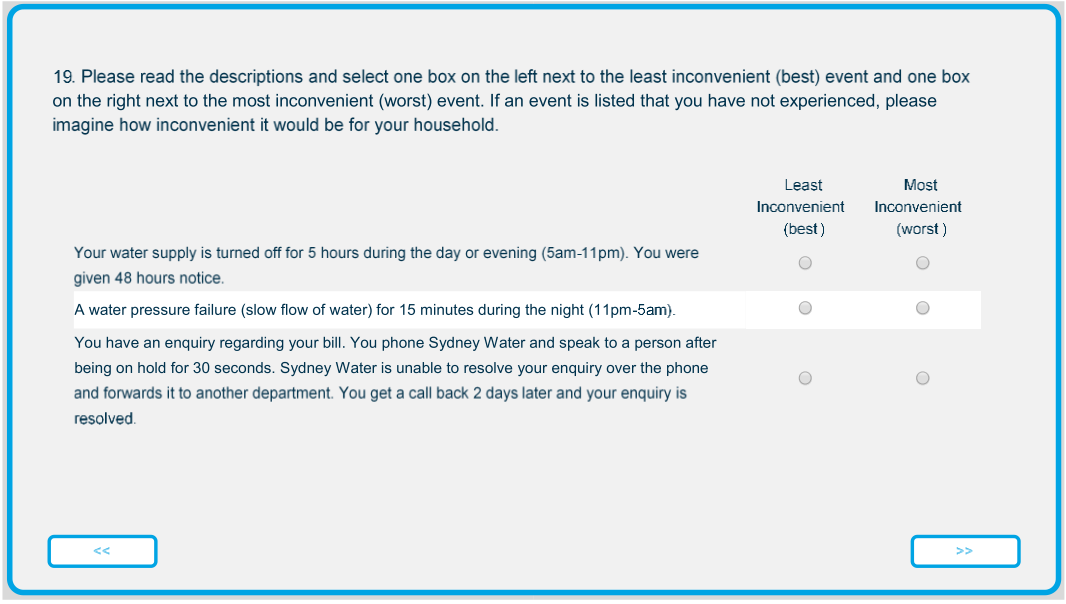

19. Please read the descriptions and select one box on the left next to the least inconvenient (best) event and one box on the right next to the most inconvenient (worst) event. If an event is listed that you have not experienced, please imagine how inconvenient it would be for your household.

	Least Inconvenient (best)	Most Inconvenient (worst)
Your water supply is turned off for 5 hours during the day or evening (5am-11pm). You were given 48 hours notice.	○	○
A water pressure failure (slow flow of water) for 15 minutes during the night (11pm-5am).	○	○
You have an enquiry regarding your bill. You phone Sydney Water and speak to a person after being on hold for 30 seconds. Sydney Water is unable to resolve your enquiry over the phone and forwards it to another department. You get a call back 2 days later and your enquiry is resolved.	○	○

<< >>

Survey progress: 45%

To view our data collection statement, click here.

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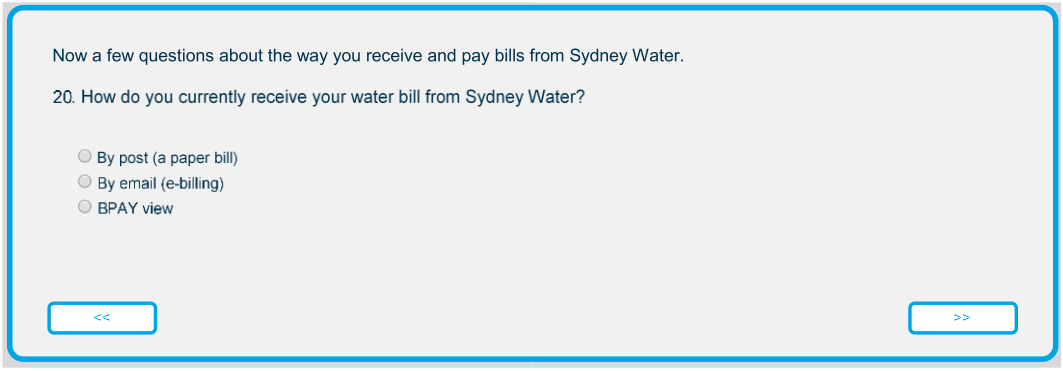

Survey progress: 47%

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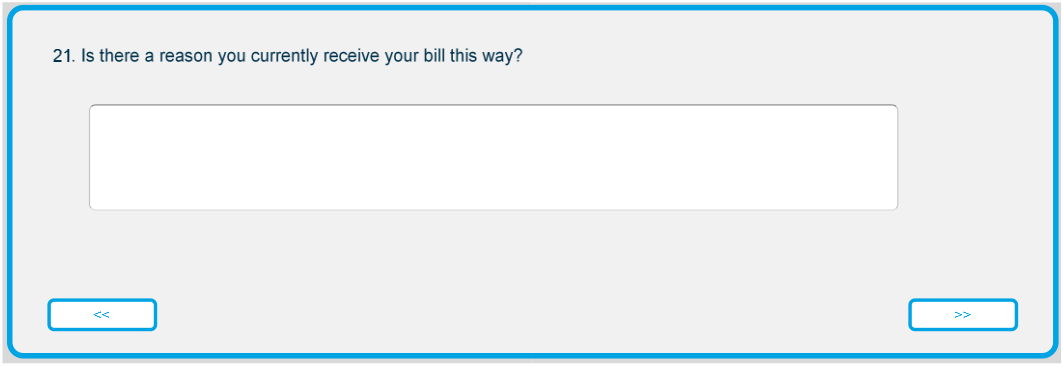

Survey progress: 49%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

Sydney Water is considering whether we should introduce fees or discounts for different bill delivery methods. We want to encourage customers to use methods that cost less and are better for the environment (for example, receiving bills by email).

Sydney Water has provisions for pensioners and customers experiencing financial hardship. These types of customer would likely be exempt if fees for bill delivery were introduced.

<< >>

Survey progress: 50%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

22a. If Sydney Water introduced a fee of $1 per quarter for customers receiving paper bills, how would you choose to receive your bill? (The average quarterly bill for water and wastewater is around $250 per quarter)

- By post (a paper bill)
- By email (e-billing)
- BPAY view

<< >>

22b. If Sydney Water introduced a fee of $2 per quarter for customers receiving paper bills, how would you choose to receive your bill? (The average quarterly bill for water and wastewater is around $250 per quarter)

- By post (a paper bill)
- By email (e-billing)
- BPAY view

<< >>

22c. If Sydney Water introduced a discount of $1 per quarter for customers receiving bills by email, how would you choose to receive your bill? (The average quarterly bill for water and wastewater is around $250 per quarter)

- By post (a paper bill)
- By email (e-billing)
- BPAY view

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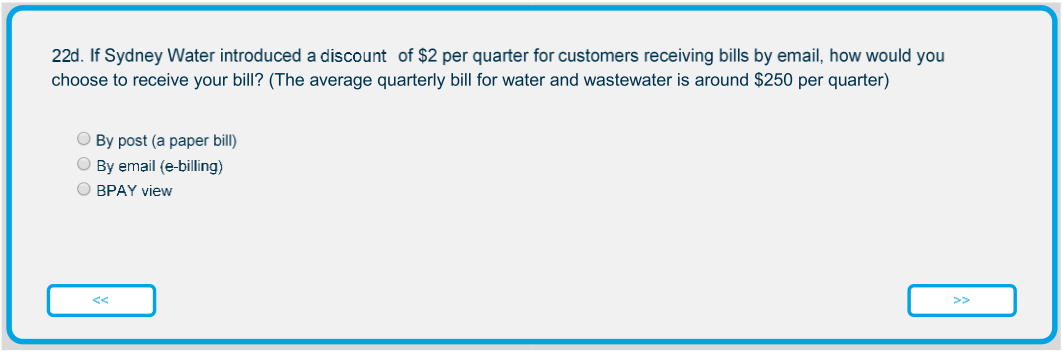

Survey progress: 59%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

23a. Do you think that Sydney Water should fee for customers who choose to receive paper bills by post?

- Strongly agree
- Agree
- No opinion / don't know
- Disagree
- Strongly Disagree

<< >>

23b. Do you think that Sydney Water should apply a discount to encourage customers to switch to receiving bills by email?

- Strongly agree
- Agree
- No opinion / don't know
- Disagree
- Strongly Disagree

<< >>

Survey progress: 66%

To view our data collection statement, click here.

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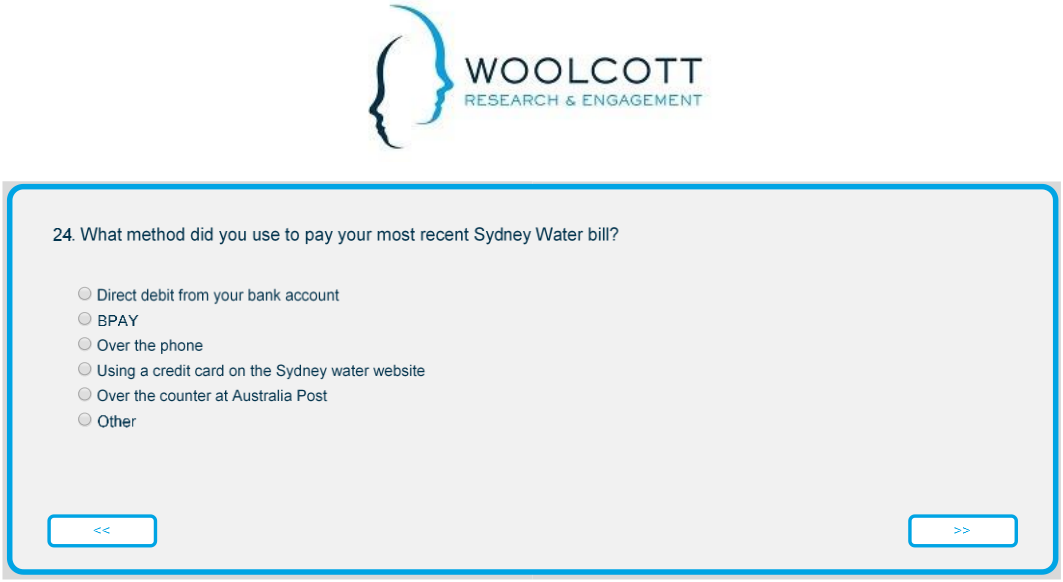

Survey progress: 67%

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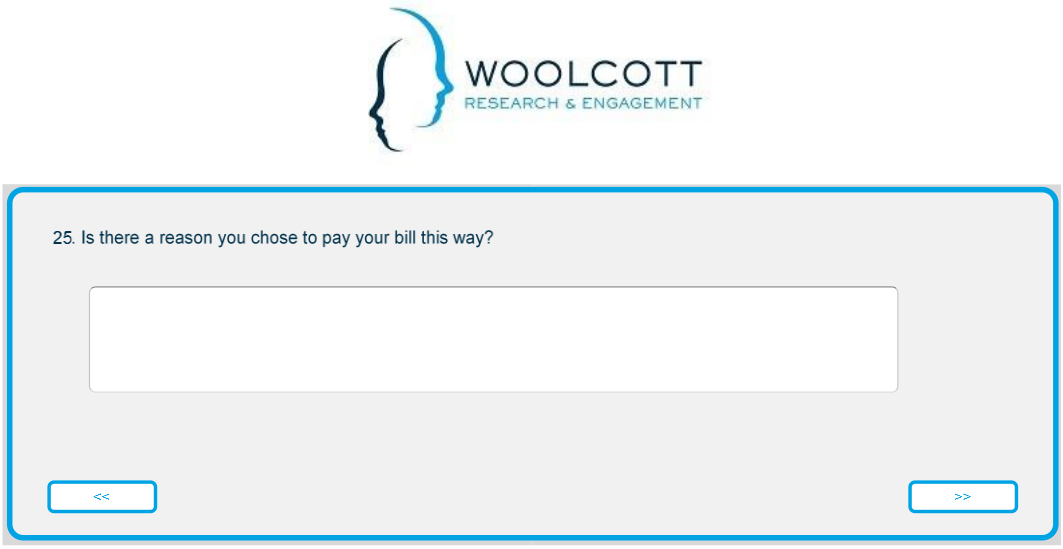

WOOLCOTT
RESEARCH & ENGAGEMENT
25. Is there a reason you chose to pay your bill this way?
<<
>>
Survey progress: 69%
To view our data collection statement, click here.
If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

Sydney Water charges a 0.4% processing fee if you use a debit or credit card to pay your bill. We are considering whether we should introduce other fees or discounts for different bill payment methods. We want to encourage customers to use methods that cost less.

Sydney Water has provisions for pensioners and customers experiencing financial hardship. These types of customer would likely be exempt if fees for bill payment were introduced.

<< >>

Survey progress: 70%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

26a. If Sydney Water introduced a $1 discount per bill to customers who pay using direct debit from a bank account, which method would you use? (The average quarterly bill for water and wastewater is around $250 per quarter)

- Direct debit from your bank account
- BPAY
- Over the phone
- Using a credit card on the Sydney water website
- Over the counter at Australia Post
- Other

<< >>

26b. If Sydney Water introduced a $2 discount per bill to customers who pay using direct debit from a bank account, which method would you use? (The average quarterly bill for water and wastewater is around $250 per quarter)

- Direct debit from your bank account
- BPAY
- Over the phone
- Using a credit card on the Sydney water website
- Over the counter at Australia Post
- Other

<< >>

26c. If Sydney Water introduced a $5 discount per bill to customers who pay using direct debit from a bank account, which method would you use? (The average quarterly bill for water and wastewater is around $250 per quarter)

- Direct debit from your bank account
- BPAY
- Over the phone
- Using a credit card on the Sydney water website
- Over the counter at Australia Post
- Other

<< >>

26d. If Sydney Water introduced a $1 fee per bill for customers who pay over the counter at Australia post, which method would you use? (The average quarterly bill for water and wastewater is around $250 per quarter)

- Direct debit from your bank account
- BPAY
- Over the phone
- Using a credit card on the Sydney water website
- Over the counter at Australia Post
- Other

<< >>

26e. If Sydney Water introduced a $2 fee per bill for customers who pay over the counter at Australia post, which method would you use? (The average quarterly bill for water and wastewater is around $250 per quarter)

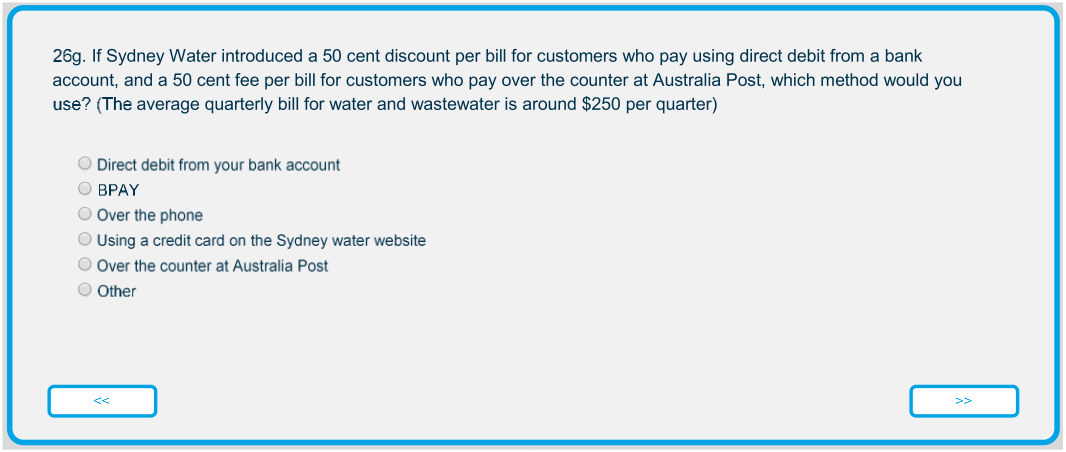
- Direct debit from your bank account
- BPAY
- Over the phone
- Using a credit card on the Sydney water website
- Over the counter at Australia Post
- Other

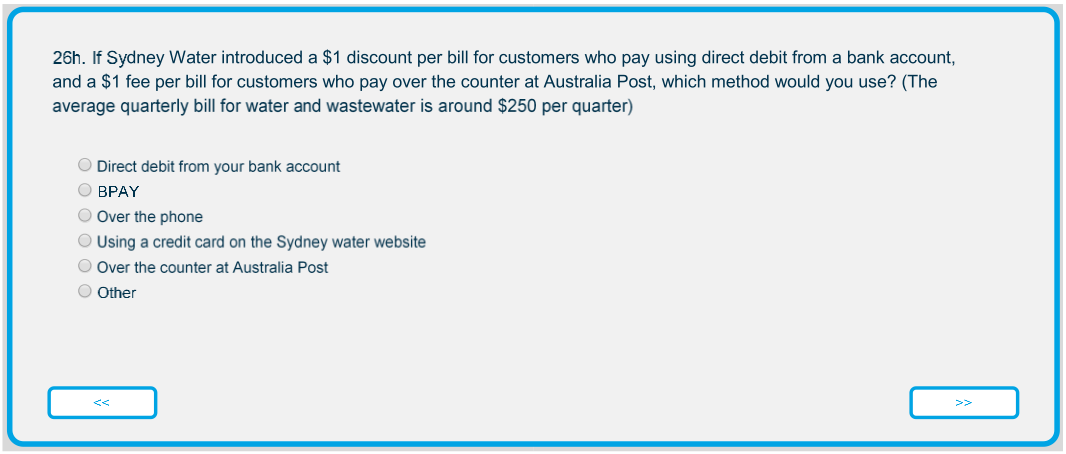
<< >>

26f. If Sydney Water introduced a $5 fee per bill for customers who pay over the counter at Australia post, which method would you use? (The average quarterly bill for water and wastewater is around $250 per quarter)

- Direct debit from your bank account
- BPAY
- Over the phone
- Using a credit card on the Sydney water website
- Over the counter at Australia Post
- Other

<< >>


26g. If Sydney Water introduced a 50 cent discount per bill for customers who pay using direct debit from a bank account, and a 50 cent fee per bill for customers who pay over the counter at Australia Post, which method would you use? (The average quarterly bill for water and wastewater is around $250 per quarter)
Direct debit from your bank account
BPAY
Over the phone
Using a credit card on the Sydney water website
Over the counter at Australia Post
Other
<<
>>


26h. If Sydney Water introduced a $1 discount per bill for customers who pay using direct debit from a bank account, and a $1 fee per bill for customers who pay over the counter at Australia Post, which method would you use? (The average quarterly bill for water and wastewater is around $250 per quarter)
Direct debit from your bank account
BPAY
Over the phone
Using a credit card on the Sydney water website
Over the counter at Australia Post
Other
<<
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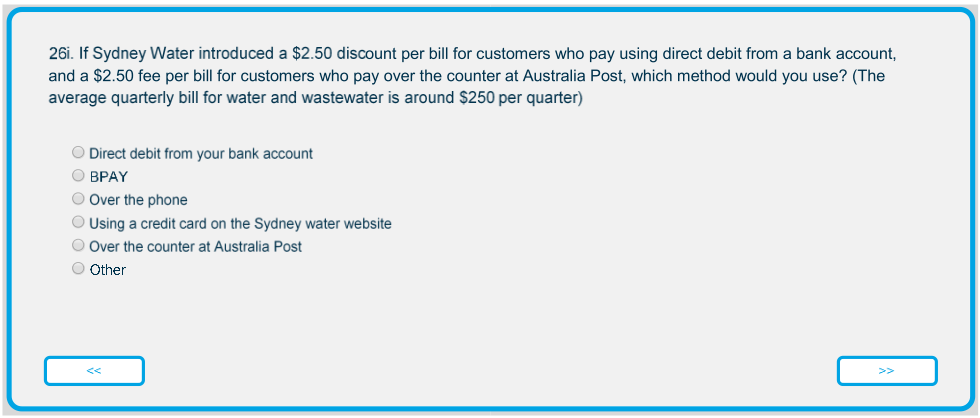

Survey progress: 87%

To view our data collection statement, click here.

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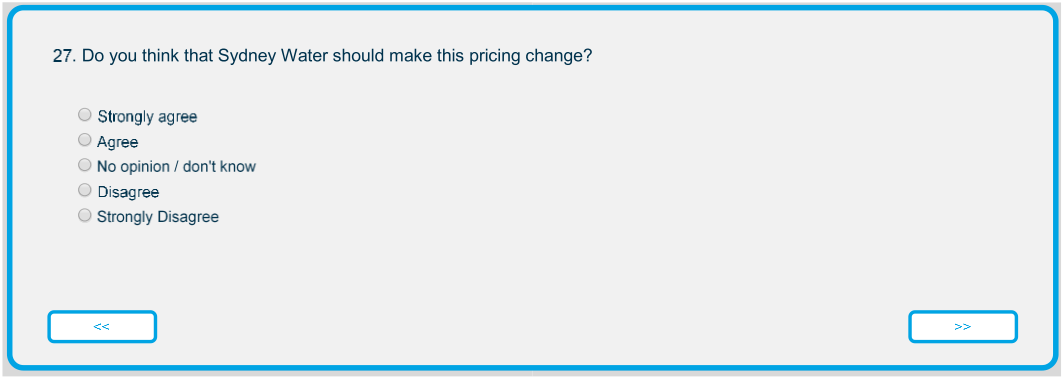

Survey progress: 89%

To view our data collection statement, click here.

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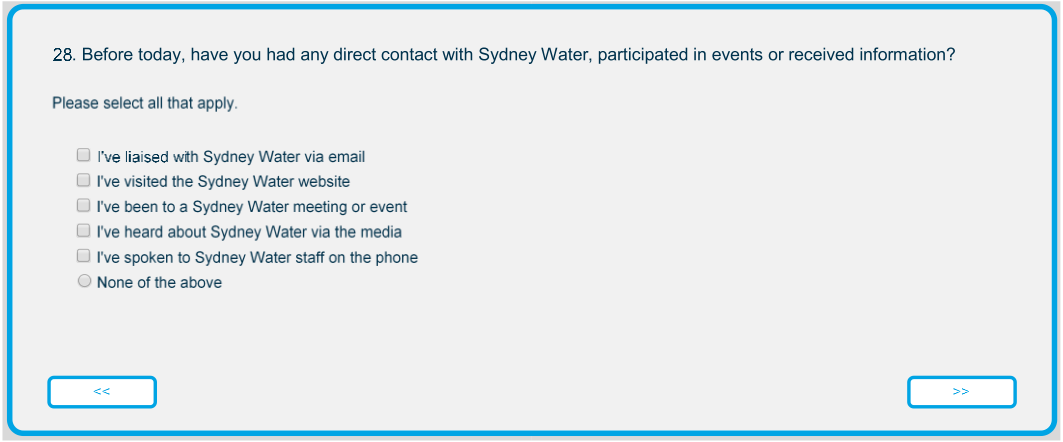

Survey progress: 90%

To view our data collection statement, click here.

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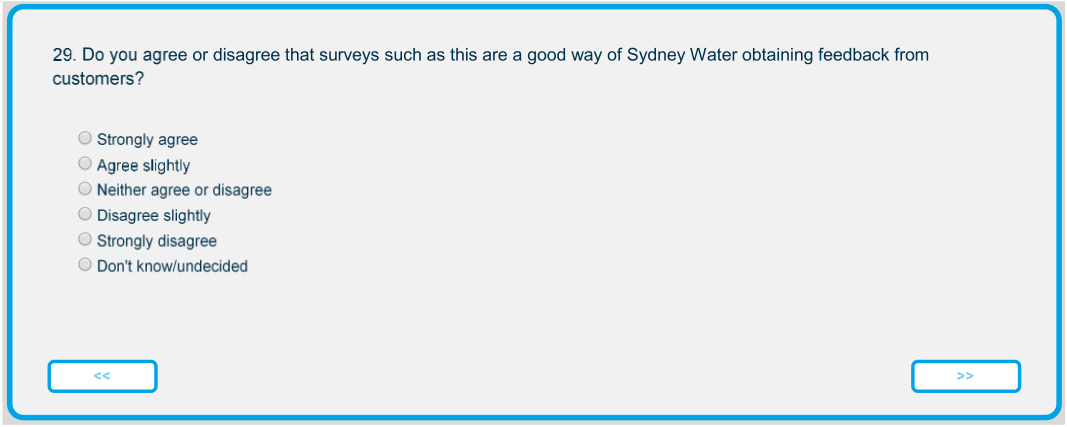

Survey progress: 92%

To view our data collection statement, click here.

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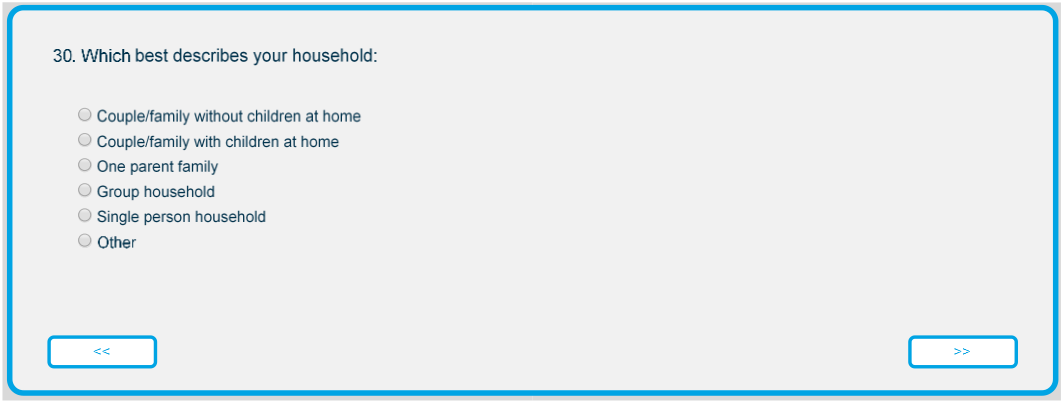


Survey progress: 93%

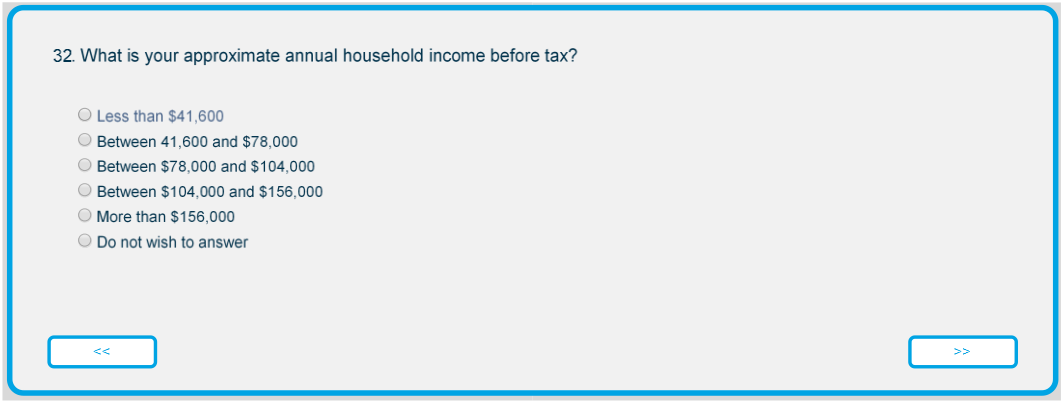
To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

Survey progress: 95%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.



Survey progress: 96%

To view our data collection statement, click here.

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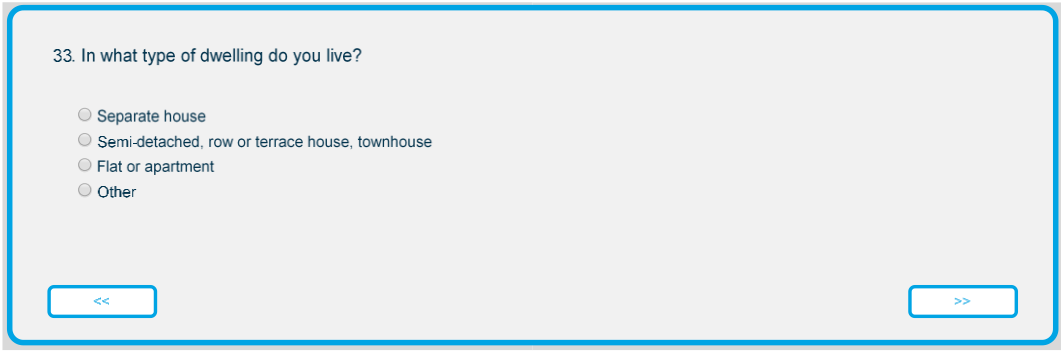
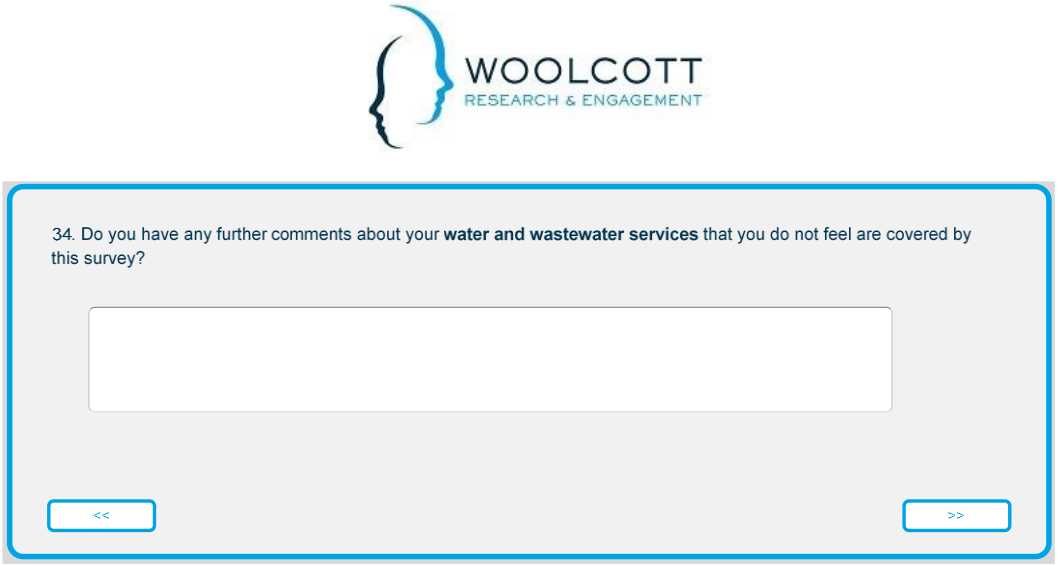


Survey progress: 98%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.



To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

If you want to find out more about Sydney Water's customer engagement plans and the outcomes of this phase (when available) please visit:

https://www.sydneywatertalk.com.au/service-levels-and-pricing

<< >>

Survey progress: 100%

To view our data collection statement, click here.

If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

Thank you for participating in this survey. Your opinions are very important.

Survey progress: 100%

To view our data collection statement, click here.

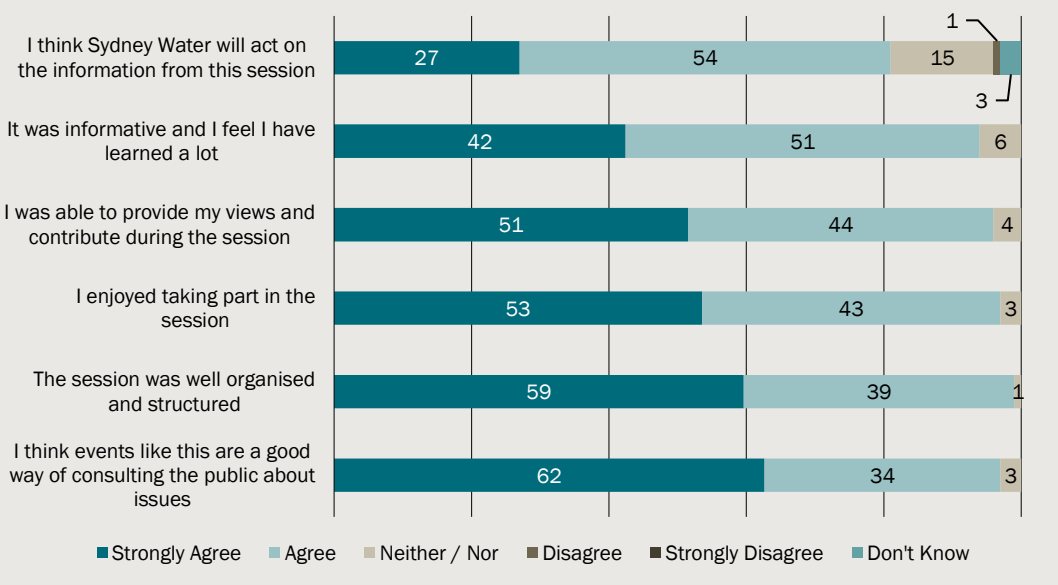
If you have any problems completing the questionnaire, please contact marketresearch@woolcott.com.au.

H Evaluation

At the end of the forums participants were given a questionnaire to enable them to provide feedback on the event. The questionnaire included a list of statements and they were asked the extent to which they agreed with each one.

The evaluation by participants was very positive, with 97 per cent agreeing that events like this are a good way of consulting the public about issues (62 per cent strongly agreeing). Some 98 per cent believed that the session was well organised and structured and 96 per cent agreed that they enjoyed taking part in the session. Some 95 per cent stated that they were able to provide their views and contribute during the session and 93 per cent felt it was informative and that they learned a lot. The majority also believed that Sydney Water would act on the information from the session (81 per cent).

H.1 Forum evaluation by participants



Q. Based on your experience today, please indicate whether you Strongly Agree, Agree, Disagree, Strongly Disagree or Neither Agree or Disagree with each of the following statements...

Base All respondents n=468

Glossary

BIBD	Balanced incomplete block design
BWS	Best-worst scaling
CBD	Central business district
CIRCA	Cultural and Indigenous Research Centre Australia (bilingual consultants conducting the in-language group discussions)
IPART	Independent Pricing and Regulatory Tribunal
LOTE	Language other than English
NFI	No further information
SME	Small-medium enterprise
SMS	Short messaging service

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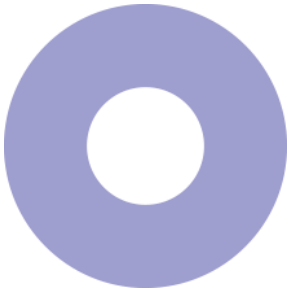
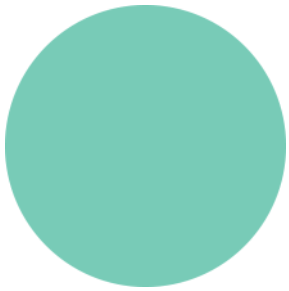

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Appendix 3B

CIPA Phase 2_Willingness to pay report

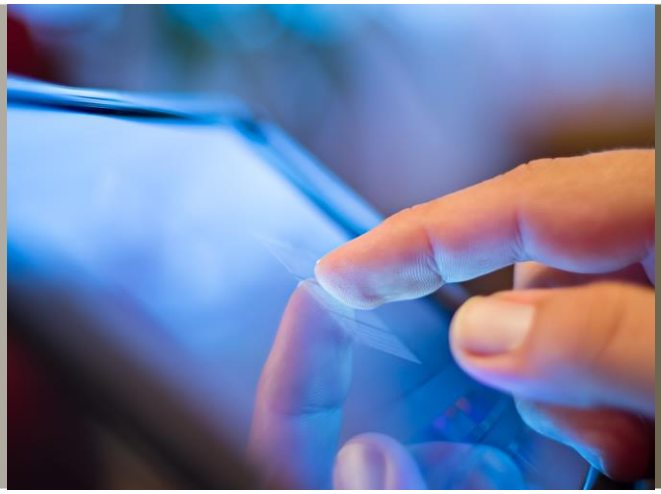
Price Proposal 2020–24

COMMERCIAL IN CONFIDENCE

FINAL REPORT

Customer willingness to pay

Customer-informed IPART submission (CIPA) Phase 2



Prepared for
Sydney Water

28 September 2018

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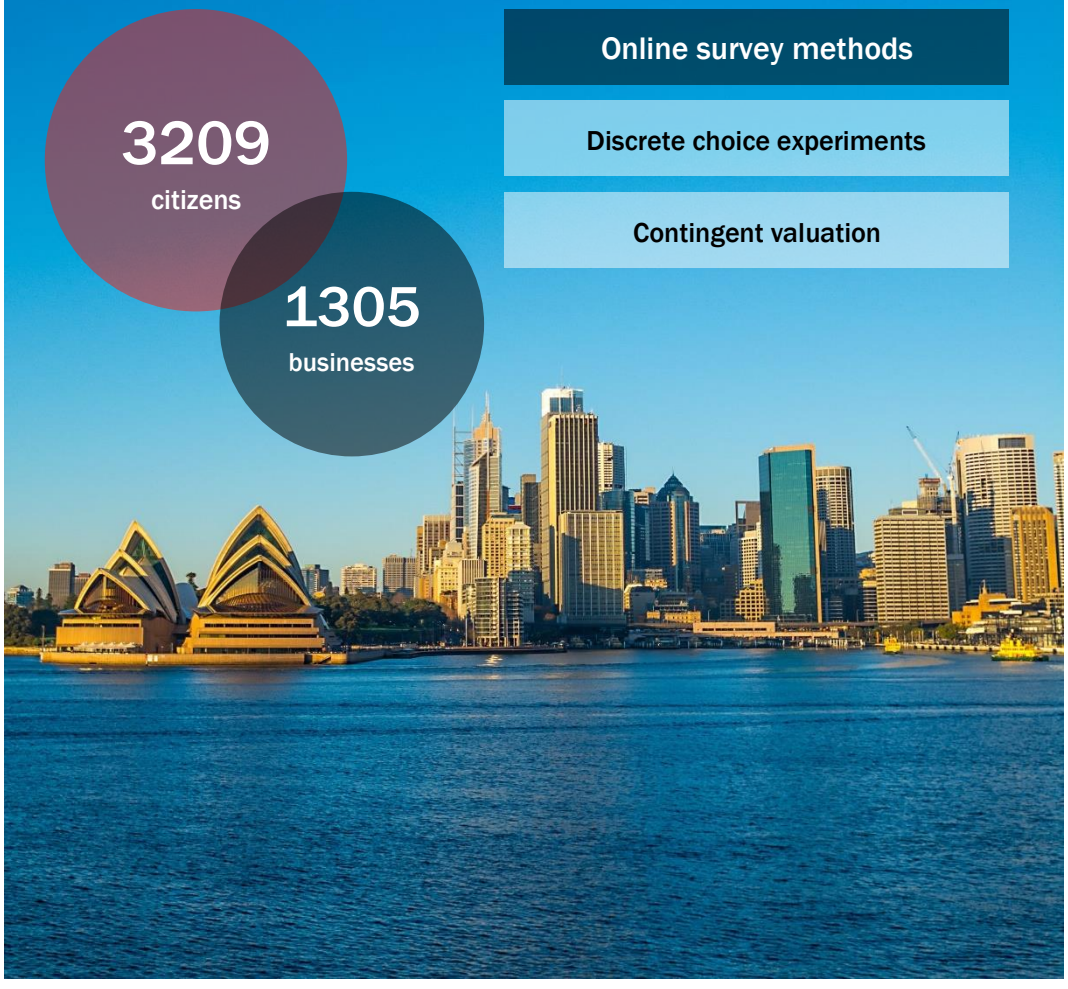
Summary

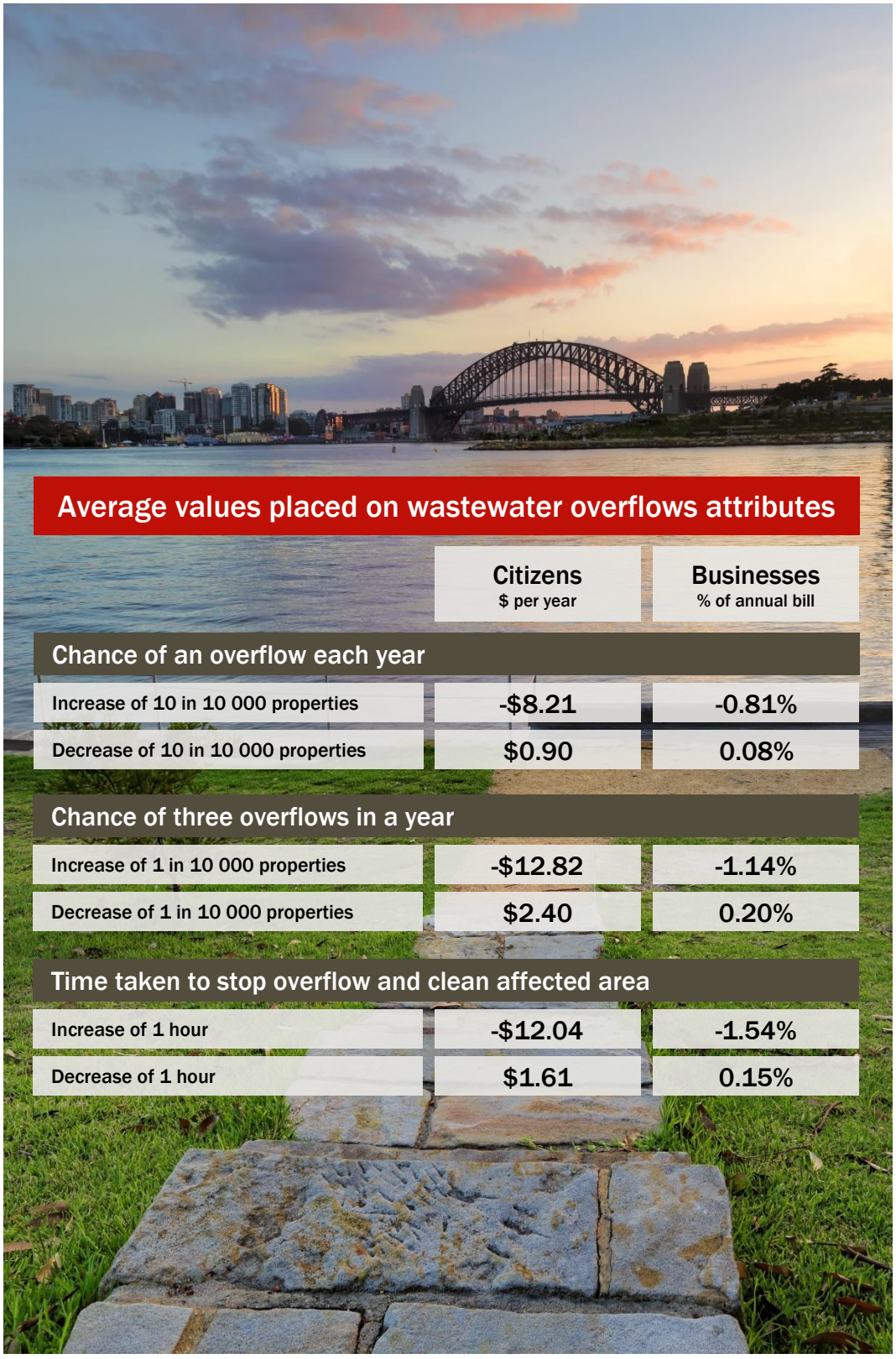
Sydney Water customers told us

- Avoiding wastewater overflows is more important than avoiding water interruptions.
- Limiting the length of interruptions is important. Long planned interruptions are worse than short unplanned interruptions.
- Avoiding repeat wastewater overflows is very important.
- The bill reductions customers expect for service degradation are much larger than the amounts they would be willing to pay for service improvement.
- Most customers are willing to pay some amount towards digital meters, limiting the release of raw wastewater at Sydney cliff faces and addressing chronic low water pressure.
- Most customers would use the features enabled by digital meters, with leak alerts the most likely and check-in alerts the least likely to be utilised.
- Improved water conservation is seen as an important benefit from digital meters, while cost is the main barrier to support.



Average values placed on water interruptions attributes

	Citizens $ per year	Businesses % of annual bill
Chance of an unplanned interruption lasting 1-3 hours		
Increase of 10 in 1000 properties	-$1.22	-0.17%
Decrease of 10 in 1000 properties	$0.56	0.09%
Chance of an unplanned interruption lasting 6-8 hours		
Increase of 10 in 1000 properties	-$4.96	-0.34%
Decrease of 10 in 1000 properties	$2.27	0.17%
Chance of three unplanned interruptions in a year		
Increase of 1 in 1000 properties	-$0.86	-0.08%
Decrease of 1 in 1000 properties	$0.39	0.04%
Chance of a planned interruption lasting 4-6 hours		
Increase of 10 in 1000 properties	-$2.59	-0.31%
Decrease of 10 in 1000 properties	$1.19	0.16%



Average values placed on wastewater overflows attributes

	Citizens $ per year	Businesses % of annual bill
Chance of an overflow each year		
Increase of 10 in 10 000 properties	-$8.21	-0.81%
Decrease of 10 in 10 000 properties	$0.90	0.08%
Chance of three overflows in a year		
Increase of 1 in 10 000 properties	-$12.82	-1.14%
Decrease of 1 in 10 000 properties	$2.40	0.20%
Time taken to stop overflow and clean affected area		
Increase of 1 hour	-$12.04	-1.54%
Decrease of 1 hour	$1.61	0.15%


Average willingness to pay for other service offerings
Citizens
Businesses
Digital meters
Water usage information through website and notifications
$3
per quarter ongoing
1.1%
of each bill ongoing
Wastewater outfalls
Limiting the release of untreated wastewater at Sydney cliff faces
$18
one-off payment
9.6%
of one quarterly bill
Water pressure
Improving pressure for 130 customers who experience chronic low pressure
$5
one-off payment
1.3%
of one quarterly bill

Contents

BOXES, CHARTS AND TABLES

1 Introduction

Background

Sydney Water is committed to improving its overall customer value proposition by putting customers at the heart of everything it does. Sydney Water has promised:

> …to make every one of our customers proud by giving them a voice in what we do, and playing our role in creating liveable communities.
>
> This means we will involve customers in the big decisions that impact them…[1]

Many of the big decisions impacting the prices and service levels experienced by customers are made in the context of the operating licence and price reviews undertaken by the Independent Pricing and Regulatory Tribunal (IPART). Sydney Water wants to involve customers in developing the business plans and proposals that it submits to these reviews and in developing other business strategies.

Sydney Water planned three phases of customer engagement for 2018 to inform its submissions to IPART in relation to the operating licence to apply from 2019 and the price determination to apply from 2020. The first phase involved a series of deliberative forums, discussion groups, interviews and online surveys conducted during February and March 2018.

This report details the method and results from a subset of the second phase of customer engagement – a series of online surveys conducted in August and September 2018, designed to measure customer willingness to pay for changes in several aspects of the services provided by Sydney Water.

Objective

The primary objective of the research detailed in this report is to provide input to economic cost-benefit analyses of service options. In particular, the objective is to measure the economic benefits or costs resulting from:

- changes in the number and nature of water supply interruptions;
- changes in the number and nature of wastewater overflows;
- notification services and online information enabled by digital water meters;
- a reduction in the release of untreated wastewater into the ocean at cliff faces; and
- an improvement in water pressure to customers experiencing chronic low pressure.

---

1 Sydney Water 2016, Sydney Water Customer Toolkit, December, p. 5.

Approach

The conventional measures of economic benefit or cost from an improvement or degradation in service levels are the Hicksian compensating and equivalent variations, which correspond to the maximum amount that customers would be willing to pay for an improvement or the minimum amount they would be willing to accept as compensation for a degradation (Randall and Stoll 1980).

Robust estimation of these values using real market data is not possible in this study. The natural monopoly nature of water and wastewater network services and the indivisibility of the network service mean that customers are generally unable to choose between alternative service levels that could be provided by Sydney Water. As a result, customer preferences are not revealed through market choices as they would be in a competitive market.

Instead we turn to stated preference techniques to measure customers' maximum willingness to pay (WTP) and minimum willingness to accept (WTA) for a range of different changes in service.

As an aside, when the term WTP is used in this report, it means the maximum WTP for a change in service. It is not used in relation to customers' satisfaction or attitude towards the level of their water bill.

There are two main stated preference techniques – contingent valuation (CV) and discrete choice experiments (DCE) – both of which are utilised in this research.

CV surveys involve presenting respondents with a specific policy or project proposal and asking whether they would vote for the proposal at a specified cost. The cost level is varied over respondents to allow the estimation of a demand curve and the expected value of WTP for the proposal. Applications of the CV technique to utility service levels include Carlsson and Martinsson (2007) and Layton and Moeltner (2005).

DCE surveys involve presenting respondents with several choice questions. Each choice question presents two or more hypothetical scenarios with specified cost and asks the respondent to indicate their preferred option. The scenarios are described by multiple attributes and the levels assigned to attributes vary over scenarios and over questions. This variation is designed to support statistical estimation of the value placed by respondents on changes in each attribute.

The application of this technique to utility service levels has been increasing over the past 15 years. Studies have been conducted in Australia in relation to electricity networks by Essential Services Commission of South Australia (KPMG 2003), Evoenergy (McNair et al 2011b, Hensher et al 2014) and the Australian Energy Market Operator (AEMO 2014) as well as water and wastewater services by Icon Water (Hensher et al 2005, McNair and Ward 2012, McNair and Scarpa 2016). Several studies have also been conducted in the United Kingdom; for example, by Yorkshire Water (Willis et al 2005), Southern Water (Accent 2013b), South East Water (Accent 2013a) and the UK Office of Gas and Energy Markets (Accent 2008).

We applied the DCE technique to the water interruptions and wastewater overflows topics, since they require estimation of the value placed on multiple service dimensions,

including the duration of the event and the likelihood of an individual customer experiencing multiple events within a 12-month period. We applied the CV technique to the other topics, since they require estimation of the value placed on a specific project or program.

1.1 Stated preference techniques by topic

Topic	Stated preference technique
Water supply interruptions	Discrete choice experiment
Wastewater overflows	Discrete choice experiment
Digital water meters	Contingent valuation
Untreated wastewater ocean outfalls	Contingent valuation
Chronic low water pressure	Contingent valuation

Source: CIE

A rigorous methodology was applied in this study, including:

- internal peer review by Professor Riccardo Scarpa, a leading expert in the field (see Appendix A);
- conducting fieldwork over multiple waves, with model estimation conducted and adjustments made to stated preference questions between each wave;
- adapting efficient experimental designs (the combinations of attribute levels across DCE alternatives) for each wave using data collected over previous waves; and
- estimating WTP using statistical models that account for:
  - differences in WTP for service improvement and WTA compensation for service degradation; and
  - variation in preferences across respondents for each service attribute and correlation in that variation across attributes.

2 The research topics

Water interruptions

Sometimes, Sydney Water needs to turn off the mains water supply to fix water pipes.

While the water supply is turned off, customers cannot get water from the taps on their property.

Sometimes, Sydney Water will give warning about a water interruption by sending a letter to affected customers at least 24 hours beforehand. On other occasions, the work will be urgent and Sydney Water will not be able to warn customers about an interruption.

Interruptions with warning typically happen after 9am in residential areas and after 11pm in business areas. Interruptions that occur without warning could happen at any time of day or night.

During a water interruption, customers could be affected by noise from trucks and workers on their street. Traffic could be blocked or slowed to allow these trucks and workers to fix the broken water pipes. Customers' travel time could be affected even when interruptions happen in areas away from their property.

Sydney Water reduces the risk of unexpected interruptions by doing things like:

- installing pressure-reducing valves in the water pipes; and
- replacing ageing pipes.

These activities come at a cost that needs to be recovered in Sydney Water bills paid by customers. This research seeks to understand customer preferences for balancing this cost with the risk of water supply interruptions.

Currently, the risk of lengthy and repeat unplanned interruptions is regulated by IPART via the water continuity standard in Sydney Water's operating licence:

4.2.2 Water Continuity Standard

a) Sydney Water must ensure that, in any financial year:

i) no more than 40,000 Properties experience an Unplanned Water Interruption that lasts for more than five continuous hours; and

ii) no more than 14,000 Properties experience three or more Unplanned Water Interruptions that each lasts for more than one hour (IPART 2015)

Wastewater overflows

Wastewater is the used water that goes down sinks, toilets and drains. When the wastewater system becomes blocked, for example due to tree roots, wastewater can overflow from the manholes that are used to access the sewerage pipes or from a grate on customer property.

In rare cases (about 1 in 200), wastewater may overflow within a building, for example from a shower drain.

Wastewater is mostly water, but it can contain viruses, bacteria and other organisms that are harmful to humans, animals and the environment. In the event of an overflow customers need to stop using toilets, sinks and other drains and keep away from the affected area until the blockage has been cleared and the area has been thoroughly cleaned by Sydney Water staff.

Wastewater overflows can happen at any time of day. It typically takes about five hours before Sydney Water has unblocked the pipe and cleaned the affected area.

As with water interruptions, customers may be affected by noise or traffic disruption due to trucks and workers conducting this work.

Sydney Water reduces the risk of these overflows by doing things like:

- putting cameras down pipes to monitor their condition;
- replacement of ageing pipes; and
- cleaning pipes.

These activities come at a cost that needs to be recovered in Sydney Water bills paid by you and other customers. This research seeks to understand customer preferences for balancing this cost with the risk of wastewater overflows.

Currently, the risk of lengthy and repeat unplanned interruptions is regulated by IPART via the wastewater overflow standard in Sydney Water's operating licence:

4.2.3 Wastewater Overflow Standard

a) Sydney Water must ensure that, in any financial year:

i) no more than 14,000 Properties (other than Public Properties) experience an Uncontrolled Wastewater Overflow in dry weather; and

ii) no more than 175 Properties (other than Public Properties) experience three or more Uncontrolled Wastewater Overflows in dry weather (IPART 2015)

Digital meters

Sydney Water is considering the merits of rolling out digital meters. Unlike existing traditional meters, which are read in person each quarter, digital meters can provide customers with more frequent information about water usage on their property; for example, hourly data, updated once a day.

Digital meters would be read automatically, meaning Sydney Water wouldn't need to enter customer properties.

As part of any program to install digital meters, customers would be able to choose whether to get the following notifications from Sydney Water (via SMS):

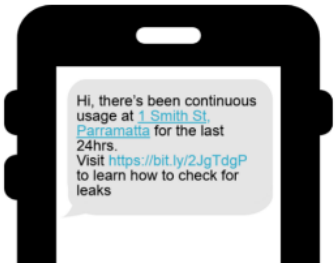
- Leak alerts
- High use notifications
- Bill predictions
- Check-in alerts.

Sydney Water could also provide an app or website portal where customers could log in to see more detailed information, such as:

- hourly usage data; and
- usage comparisons to customers with similar characteristics.

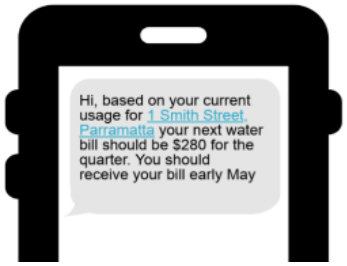
Leak alerts

Digital meters can detect continual water flow above a certain threshold, which may be due to a leak. Sydney Water could send an alert or notification if a customer has continual flow at their property over 24 hours. This could be useful for identifying a continually running toilet or a hidden leak, for example.



High use notifications

Sydney Water could send customers an alert or notification when their daily water use goes over an amount that they have specified. This could be useful for catching watering systems that have been left on, or hoses being used to top up swimming pools, before they cause large water bills.



Bill predictions

By understanding customers' average daily use, Sydney Water could send customers an estimate of their next water bill early in the billing cycle. This could help customers manage their finances by avoiding unexpected changes in quarterly bills.

Check-in alerts

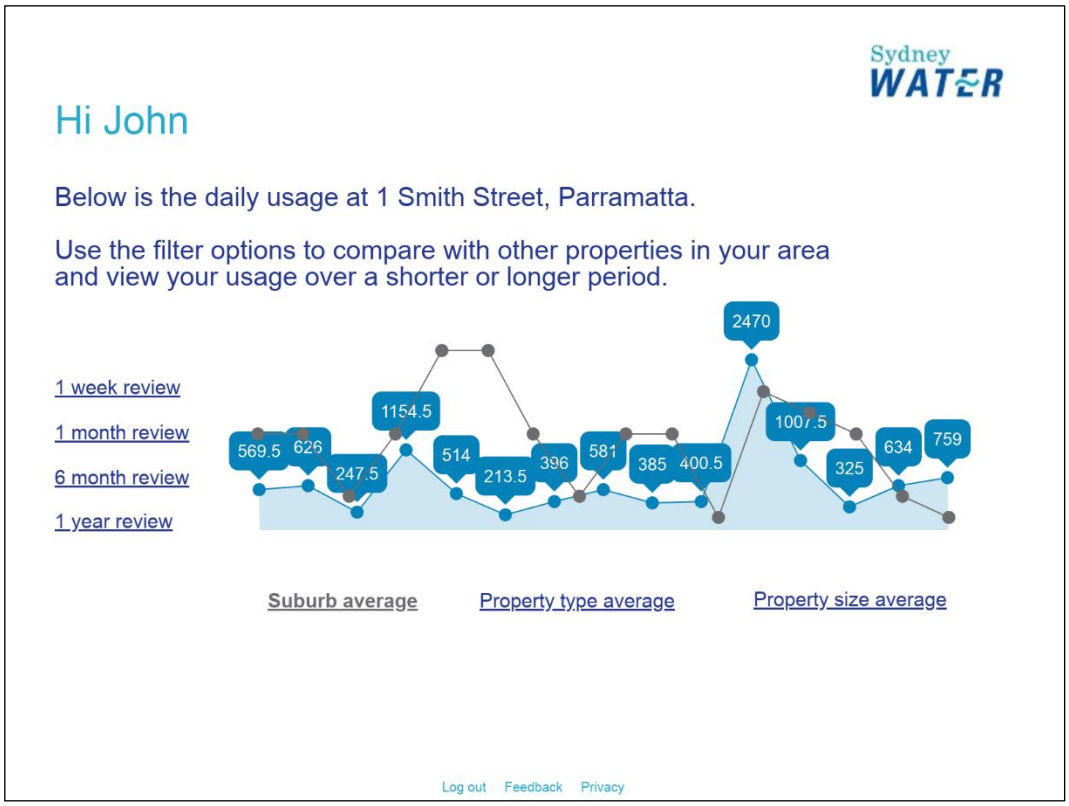
Sydney Water could allow customers to get check-in alerts about water usage at other properties that have provided permission. For example, customers could get an alert:

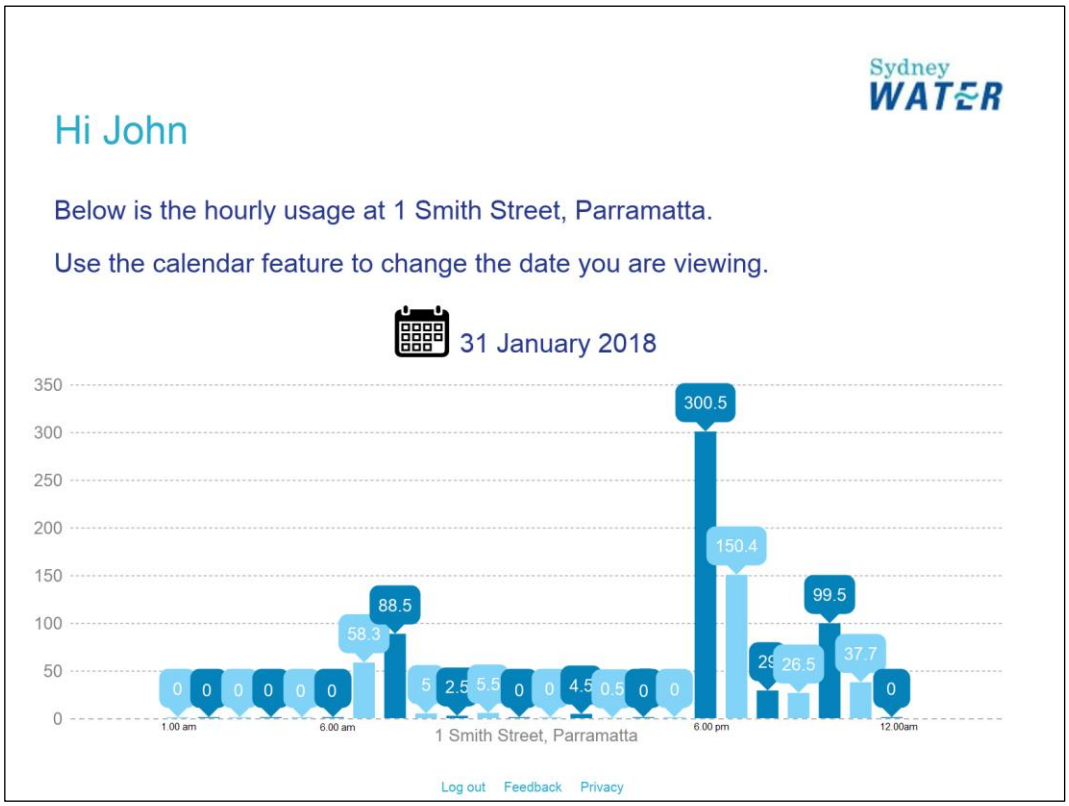
- when water is used at a vacant property or holiday house they manage; or
- when daily water use falls to zero at an elderly relative's property, which could alert customers to a health problem.

App and/or website portal

An app or web portal could show customers:

- how their daily water usage compares to other properties with similar features (customers may find this useful during times of drought when water conservation is even more important); and
- hourly water usage, which would allow customers to check the usage on their property in greater detail.





This information would not be pushed to customers automatically as for the earlier options. Customers would need to log in and look at the data themselves.

Digital meters may be more expensive than the water meters we have used in the past. While some of that cost would be paid for by not having to read meters in person and from finding leaking pipes more quickly, some of the cost may need to be paid for by increases in water bills. This research seeks to measure customer WTP for the installation of digital meters and the various notification and information services that would enable.

Wastewater ocean outfalls

Most of Sydney's wastewater is treated and released deep in the ocean, but there are three outfalls in Sydney, built between 1916 and 1936, that release raw (untreated) wastewater at the base of cliff faces under the sea. This is the only wastewater system in New South Wales that puts untreated wastewater into the ocean 365 days of the year.

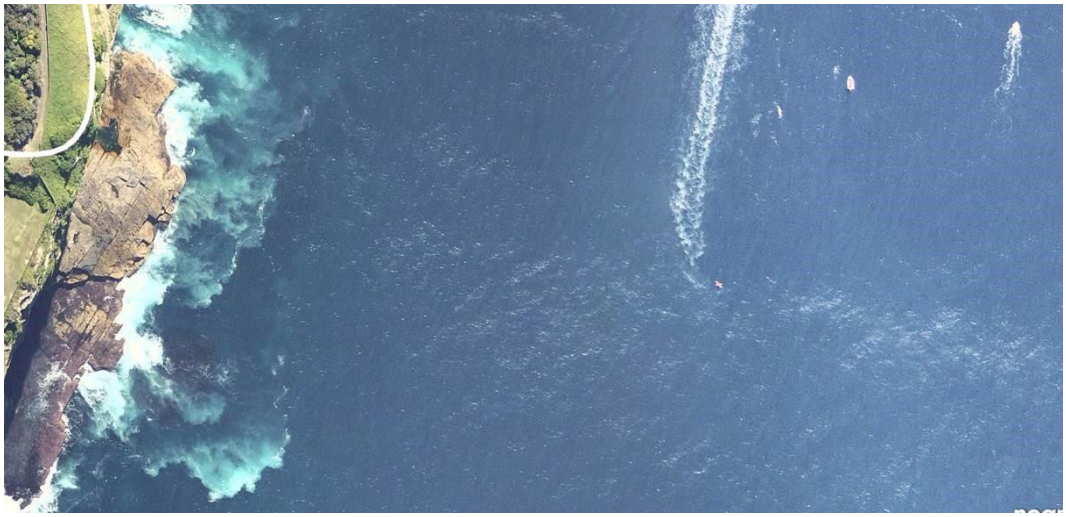
Every day, these three outfalls put four Olympic swimming pools' worth of raw wastewater into the ocean, along with 2-3 wheelie bins' worth of plastics and hygiene products. Despite this, water quality testing that occurs every six days at recreational areas near the outfalls continuously shows very good water quality. The pollutants are in a relatively small area of ocean at the bottom of cliff faces.

There are two main problems caused by the raw wastewater outfalls:

- public health risks; and
- ecosystem impacts.

In relation to public health risks close to the outfall sites, a Sydney Water pollution study found that:

- around 2000 people visit the affected areas each year for spear fishing, rock fishing and swimming; and
- around 300 people have direct contact with pollutants through organised swim and paddle events.



Ecosystem impacts close to the outfall sites, include:

- degraded ocean floor habitat, with barren areas and 'brown fuzz';
- increased growth of algae;
- more opportunistic species in the area;
- floating rubbish, which can harm sea creatures by swallowing or becoming tangled;
- a bad smell, including on cliff tops; and
- a visible 'plume' in the water 75 per cent of the time, including oil and grease on top of the water.

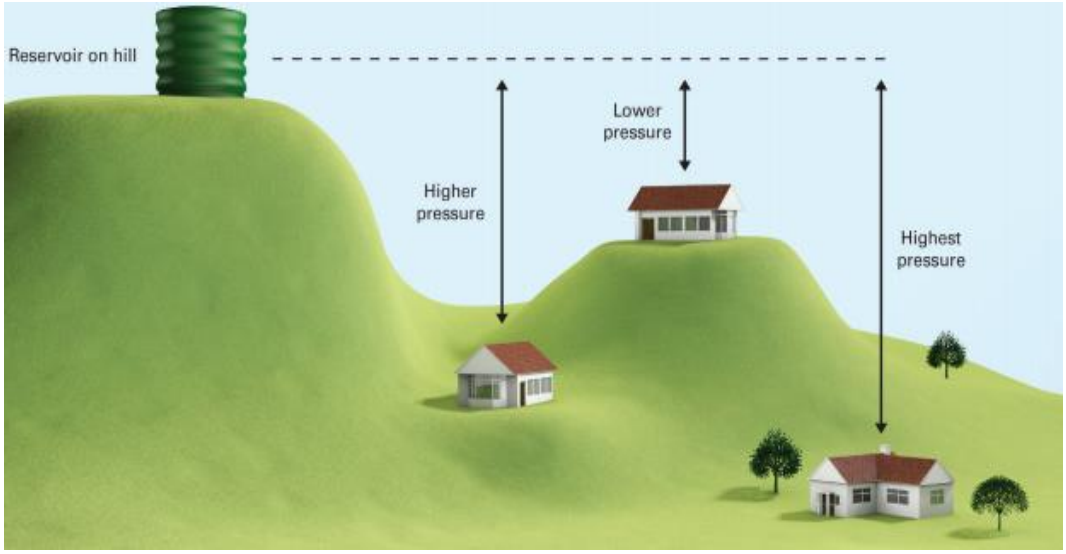
Sydney Water can reduce these public health and ecosystem impacts by investing in new infrastructure to divert the raw wastewater into another part of the network where it will be treated.

After this investment, no wastewater would be released from the three outfalls during dry weather. Wastewater flows are highest when it rains, because rain gets into the wastewater system through faulty private plumbing and cracks in pipes. The new infrastructure would not be able to divert all of this extra wastewater. As a result, some diluted raw wastewater would be released from the three outfalls when it rains.

This new infrastructure would come at a cost that needs to be recovered in Sydney Water bills paid by customers. This research seeks to measure customer WTP for the project and the resulting reduction in releases of raw wastewater into the ocean.

Water pressure

Water gets to customers through a network of water supply zones. Water reservoirs are located at high points in each water supply zone. Water gets from the reservoir across the zone using gravity. Water pressure varies at different locations in the zone depending on how far customers are from the reservoir and their elevation in relation to the reservoir.



Water pressure in Sydney Water's system can fall when people are using water or when a pipe breaks. In areas with lower pressure, this may result in slow flow of water from taps. Customers may notice:

- taking a few minutes to fill a bucket;
- only a trickle of water coming from second-floor taps/shower; or
- not being able to use water in more than one place in the home (e.g. not being able to shower while using the washing machine).

There are around 130 properties in Sydney that experience these low-water-pressure events on an almost daily basis. Sydney Water can improve water pressure to these 'worst-served' properties by investing in water pressure booster pumps. This investment comes at a cost that would need to be paid for by Sydney Water bills. This research seeks to measure customer WTP to bring the service level for these 130 properties up to the minimum level experienced by the rest of Sydney Water's customers.

3 The research method

Online surveys

Online surveys were used to elicit preferences for all five of the research topics described above. Two of the topics – ocean outfalls and water pressure – were covered by the same questionnaire. Each of the four questionnaires had a version for citizens to complete on behalf of their households and a version for business owners or managers to complete on behalf of their small-medium enterprises (SMEs). As discussed in the introductory chapter, the questionnaires covering water interruptions and wastewater overflows used a discrete choice experiment technique to elicit WTP for changes in the nature and risk of different types of service failure events. The questionnaires covering digital meters, ocean outfalls and water pressure used a contingent valuation technique to elicit WTP for the relevant project/program proposal under consideration.

3.1 Online surveys

Topic	Versions	Stated preference technique	Number of waves of fieldwork
Water interruptions	Household and business versions	Discrete choice experiment	3
Wastewater overflows	Household and business versions	Discrete choice experiment	3
Digital meters	Household and business versions	Contingent valuation	2
Ocean outfalls and water pressure	Household and business versions	Contingent valuation	3

Source: CIE

All of the questionnaires (see Appendices B to E) followed a similar format, comprising:

- a welcome, with instructions and information about privacy and contact details;
- screening questions to ensure representative samples that exclude respondents with potential conflicts of interest and respondents that do not pay any amount for water and wastewater;
- a question about the amount the respondent pays for water and wastewater each quarter;
- information about the topic, including its impact on customer outcomes and what Sydney Water can do to influence those outcomes;
- a 'cheap talk' script, reminding respondents that their answers to the stated preference question(s) will influence Sydney Water decisions about customer outcomes and bills;

- stated preference questions (either six DCE questions or one CV question, depending on the topic – discussed in further detail below);
- debriefing questions about the motivation behind and approach taken by the respondent to the stated preference question(s); and
- questions about the respondent's characteristics and experiences relevant to the topic.

The questionnaires were developed through several stages of review and testing, including:

- review and input from Sydney Water staff;
- review by internal peer reviewer, Professor Riccardo Scarpa (see Appendix A); and
- multiple waves of survey fieldwork.

Stated preference questions

Discrete choice experiments

There are several important decisions that must be made when designing a DCE. These include:

- the service attributes to be included in the choice tasks and how those attributes should be defined;
- the number of alternatives to be included in each choice task and whether one of the alternatives should represent the status quo;
- the number of questions to be answered by each respondent;
- the levels that the service attributes can take in the questions;
- the combinations of attribute levels in each question (that is, the experimental design);
- the order in which questions are presented to each respondent; and
- the information, instructions and/or questions used to 'prime' respondents for the choice.

The decisions taken in relation to these matters in the present study are discussed in the remainder of this chapter.

Service attributes

The attributes included in the water interruptions DCE were:

- Short unplanned interruptions – chance each year of an interruption lasting 1-3 hours (measured in terms of the number of properties in 1000 experiencing the event);
- Long unplanned interruptions – chance each year of an interruption lasting 6-8 hours (properties in 1000);
- Repeat unplanned interruptions – chance of experiencing three interruptions in a year (properties in 1000);

- Planned interruptions – chance each year of a planned interruption lasting 4-6 hours (properties in 1000); and
- Cost – the permanent change in the amount you pay for water each year ($).

These attributes were designed to align with the categories of interruptions being measured for the purpose of a cost-benefit analysis of alternative system performance standards. The existing water continuity standard in Sydney Water's operating licence is defined in terms of:

- the number of properties experiencing unplanned interruptions lasting longer than five hours per year; and
- the number of properties experiencing three or more unplanned interruptions lasting longer than one hour per year.

Changes in Sydney Water network management to meet different standards may necessitate or result in changes in the number of planned or short unplanned interruptions.

Analysis of data by Sydney Water showed that:

- the average duration of unplanned customer interruptions lasting less than five hours was around two hours;
- the average duration of unplanned customer interruptions lasting longer than five hours was around seven hours; and
- the average duration of a planned customer interruption was around five hours.

The attributes relating to short, long and planned interruptions in the DCE were defined as interruptions lasting ±1 hour around these averages.

The cost attribute was defined as an ongoing payment (or saving) because of the ongoing nature of the changes in costs under alternative system performance standards. The attribute was defined as a change in the bill amount, rather than a total bill, to limit the cognitive burden of comparing alternatives.

The units of measurement were set at 'properties in 1000' for each of the interruptions attributes. Our review of literature on communicating small probabilities indicated that this 'natural frequency' format is the format that is interpreted most accurately by respondents (e.g. Hoffrage et al 2000). This constant-denominator format is more readily understood than constant-numerator formats, such as '1 in *X*' years (Barratt et al 2005).

To assist respondents in interpreting the frequencies, we included the following text in the instructions given prior to the choice tasks:

> The chance of interruptions happening is expressed as the number of properties in every 1000 experiencing an interruption each year. On average, there are roughly 3000 properties in a suburb. So, 1000 properties is around one third of a suburb.

During the first and smallest wave of fieldwork only, the DCE also included the following attribute:

- Notice – amount of notice given before water supply is turned off (hours).

This attribute was removed from the second and third waves of fieldwork to simplify the choice task and improve the statistical significance of estimates of WTP for attributes of critical importance to the imminent cost-benefit analysis, particularly the 'long unplanned interruptions' attribute, which was one of the least statistically significant attributes in the analysis of the Wave 1 data.

The attributes included in the wastewater overflows DCE were:

- chance of a wastewater overflow on your property each year (properties in 10 000);
- chance of three wastewater overflows on your property each year (properties in 10 000);
- time taken to stop overflow and clean affected area (hours); and
- the permanent change in the amount you pay for wastewater services each year ($).

As with the water interruptions attributes, these attributes were designed to align with inputs required for a cost-benefit analysis of alternative system performance standards. The wastewater overflow standard is defined in terms of:

- the number of properties experiencing an uncontrolled overflow in dry weather per year; and
- the number of properties experiencing three or more uncontrolled overflows in dry weather per year.

The cost attribute was defined in the same way as for the water interruptions DCE. The units of measurement for the attributes relating to chance of overflows were defined in natural frequency format for the reasons discussed in relation to water interruptions attributes above; however, the denominator was increased to 10 000 properties for the wastewater DCE to reflect the smaller probabilities of these events.

Number of alternatives in each task

Both the water interruptions and wastewater overflows questionnaires presented three alternatives in each choice task, with one of those alternatives being the status quo. This design was judged to strike an appropriate balance between statistical power and task complexity. Previous studies have found that statistical significance for a given sample size has been low where choice tasks presented only a status quo alternative and a single change option (for example, see Rolfe and Bennett 2009). Presenting four or more alternatives in each choice task was judged to be too cognitively demanding, based on feedback from participants in past studies (such as McNair and Scarpa 2016).

One of the alternatives was specified as the status quo to account for reference-dependent decision making, for which there is now a large body of evidence from behavioural economics, including in support of prospect theory (Kahnemann and Tversky 1979). Including the status quo alternative allows for the estimation of any asymmetric valuation of gains and losses.

McNair and Scarpa 2016 note there is an ongoing debate on the merits of including a status quo alternative in choice tasks that simulate markets from which individuals cannot practicably opt out:

> some studies have excluded the status quo alternative from choice tasks on the basis that respondents typically exhibit a strong bias towards the status quo option that is unrelated to the attribute levels. The concern is that this bias is driven to some extent by an unwillingness to do the cognitive work necessary to express true preferences. Accent Market Research has tended to use forced choices (choices with no status quo alternative) in its studies for UK water companies and notes that this approach is consistent with the majority view of practitioners surveyed as part of the UKWIR 2011 study (Accent 2013b, p. 32).

On the basis of the weight of evidence relating to reference-dependent choice, the McNair and Scarpa (2016) study included a status quo alternative in all choice tasks and found strong evidence for asymmetric preferences. Given that finding and the similarity of that study to the present study we decided to include a status quo alternative in all choice tasks.

Number of questions per respondent

Both the water interruptions and wastewater overflows questionnaires included six choice tasks. The risk of respondents dropping out of self-administered questionnaires increases with the number of choice tasks presented. The number of respondents required to obtain statistically significant estimates of WTP reduces with the number of choice tasks presented to each respondent. A sequence of six choice tasks per respondent was judged to strike an appropriate balance between these two considerations.

Service attribute levels

The service attribute levels used in the water interruptions and wastewater overflows surveys are presented in table 3.2 and table 3.3.

The levels for the 'current service' alternative were based on average historical performance data provided by Sydney Water. The ranges in levels for the change alternatives were selected to at least cover the service levels expected to be included in the cost-benefit analysis of alternative system performance standards. They were selected to be large enough to enable statistically significant estimation, but not so large as to be perceived as infeasible by respondents.

Inclusion of both positive and negative changes in levels relative to the current service level to enable separate estimation of WTP for improvement and WTA compensation for degradation of service.

To account for variation in the size of businesses and the likely positive relationship between business size with WTP, the cost attribute levels were calculated as a proportion of business respondents' estimated quarterly bills.

Where practicable, the number of levels included in the vector for each attribute was set at a factor of the number of questions in the experimental design, so that each level was presented to respondents on a similar number of occasions.

A number of changes were made over the course of the three waves of fieldwork. After the first and second waves of fieldwork, the vectors of levels for the bill attribute were

adjusted to ensure they covered the estimated WTP/WTA for the best/worst combination of attribute levels using the data gathered to that point.

A number of other changes were made to the water interruptions attribute levels to improve the statistical significance of estimates of WTP for the 'long unplanned interruptions' attribute, which was relatively weak in estimations on the Wave 1 data. In Wave 2, the 'notice' attribute was removed (as discussed above) and the status quo attribute levels were excluded from the vectors of alternative levels to enable the use of an 'optimal orthogonal-in-the-difference' experimental design, which is discussed in more detail below. In Wave 3, the range of levels (and increment between levels) for the 'short unplanned interruptions' attribute were decreased, the range of levels for the 'long unplanned interruptions' attribute were increased, and the status quo levels were reintroduced into the vector of levels for all attributes other than 'long unplanned interruptions'.

3.2 Water interruptions service attribute levels

Attribute	Current package level	Alternative levels
Short unplanned interruptions – chance each year of an interruption lasting 1-3 hours (properties in 1000)	120	Wave 1: 60, 90, 120, 150, 180 Wave 2: 60, 90, 150, 180 Wave 3: 100, 110, 120, 130, 140
Long unplanned interruptions – chance each year of an interruption lasting 6-8 hours (properties in 1000)	16	Wave 1: 8, 12, 16, 20, 24 Wave 2: 8, 12, 20, 24 Wave 3: 5, 10, 20, 25
Repeat unplanned interruptions – chance of experiencing three interruptions in a year (properties in 1000)	3	Wave 1: 1, 3, 6, 10 Wave 2: 1, 5, 7, 10 Wave 3: 1, 3, 5, 10
Planned interruptions – chance each year of a planned interruption lasting 4-6 hours (properties in 1000)	20	Wave 1/3: 10, 15, 20, 25, 30 Wave 2: 10, 15, 25, 30
Notice – amount of notice given before water supply is turned off (hours)	Wave 1: 24 Wave 2/3: N/A	Wave 1: 4, 24, 48 Wave2/3: N/A
Cost – the permanent change in the amount you pay for water each year. ($)	No change	Citizens: Wave 1/2: -30, -15, -10, -5, -2, 2, 5, 10 Wave 3: -20, -10, -5, -2, 0, 2, 5, 10 Business cost levels were equal to the citizen levels above divided by 250 and multiplied by the respondent's estimated quarterly amount paid for water and wastewater services.

Source: CIE

3.3 Wastewater overflows service attribute levels

Attribute	Current package level	Alternative levels
Chance of a wastewater overflow on your property each year (properties in 10 000)	50	10, 30, 80, 120
Chance of three wastewater overflows on your property each year (properties in 10 000)	1	'Almost never', 1, 3, 5
Time taken to stop overflow and clean affected area (hours)	5	3, 4, 6, 7
The permanent change in the amount you pay for wastewater services each year ($)	No change	Wave 1: -40, -20, -10, -5, 2, 5, 10, 20 Wave 2/3: -75, -25, -10, -5, 0, 2, 5, 10

Source: CIE

Experimental designs

To conduct the DCE, the analyst needs to assign combinations of attribute levels to the various alternatives and questions. These combinations are referred to as the experimental design. The experimental design has a direct impact on the statistical significance of estimates of WTP. If some information about preferences is known, it is possible to generate an experimental design that can elicit statistically significant estimates of WTP from a smaller number of respondents than a randomly generated design.

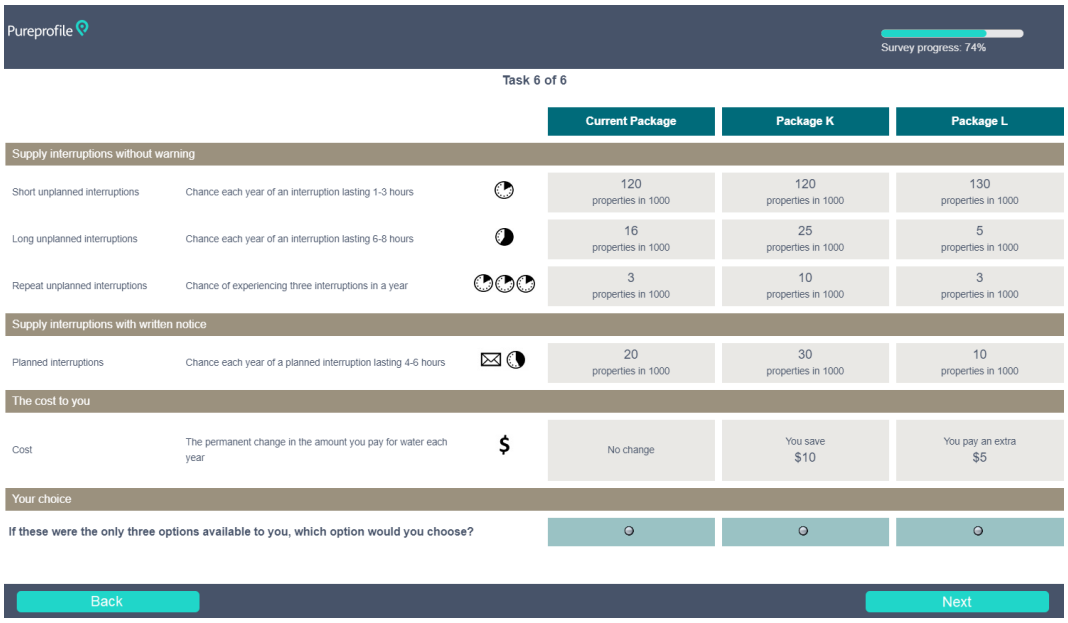
This study used an adaptive experimental design process, in which three separate designs were used for each DCE survey – one for each wave of fieldwork. One wave of fieldwork for each DCE survey used an 'optimal orthogonal-in-the-differences' design. This type of design is constructed such that attributes do not take the same level across alternatives. Manual adjustments were made to ensure the design did not include any dominated alternatives (i.e. an alternative that is not better on at least one attribute when compared to each other alternative in the same choice task). These designs may not turn out to be particularly efficient *ex post*, but this represents a prudent approach to designing DCEs when little information is available about population preferences over the hypothetical alternatives.

The designs for the two other waves of fieldwork for each DCE were generated to minimise C-error (the sum of the variances of the WTP estimates for each service attribute), except for the design used for Wave 3 of the wastewater overflows survey, which was generated to minimise D-error (Scarpa and Rose 2008). This exception was made due to the uncertainty about how to compute the C-error in the presence of effects-coded (non-linear) parameter estimates on the cost attribute in the prior utility function. The prior parameter estimates used to generate the efficiency criteria were based on estimates of WTP from basic multinomial logit models run on the data collected in the waves of fieldwork undertaken to that point. Constraints were included in the design search to preclude dominated alternatives and to set ranges for the number of times each attribute level could appear in the design. The searches were performed using the Ngene software package.

The water interruptions designs comprised five blocks of six questions (except in Wave 2 in which the design comprised only four blocks) and the sewerage overflows designs comprised four blocks of six questions, with each respondent answering only one randomly selected block. The reason for using multiple blocks was to improve design efficiency and limit the impact of any single choice task on the results. The order in which questions from the blocks were presented to respondents was randomised to ensure the WTP estimates remain unaffected by ordering effects (for example, see McNair et al 2011a).

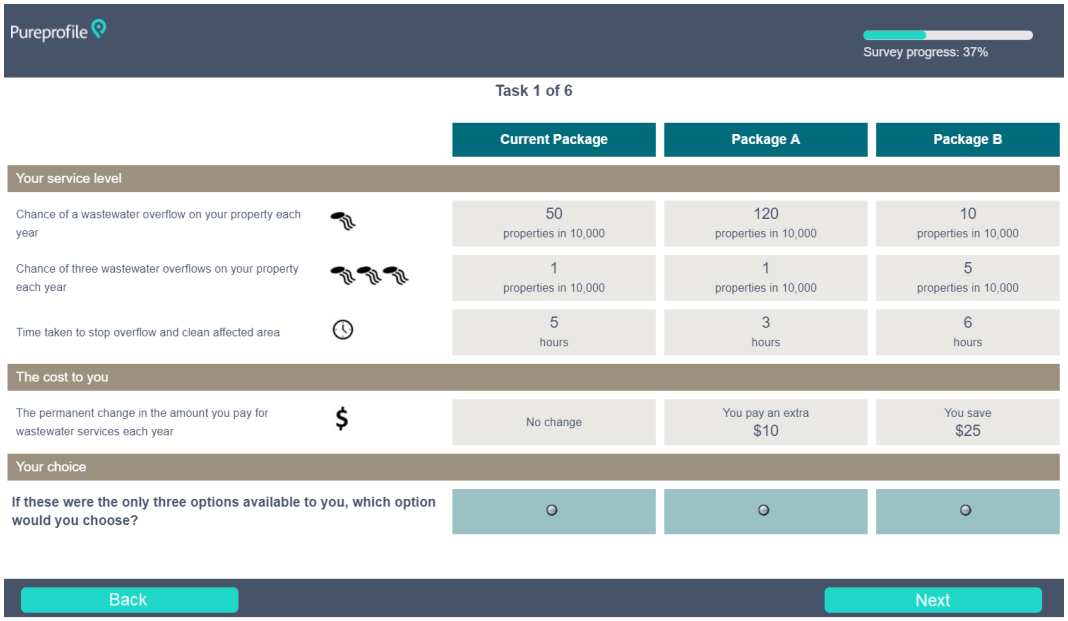
Examples of the choice questions used in the two surveys are presented in figure 3.4 and figure 3.5.

3.4 Example of a choice task in the water interruptions survey



Data source: CIE

3.5 Example of a choice task in the wastewater overflows survey



Data source: CIE

Instructions, priming and debriefing

Before being presented with the choice tasks, respondents were shown an example of a choice task. The cost levels in the examples were replaced with generic '$X' and $Y' to ensure the examples did not lead to any anchoring bias. Instructions were provided in relation to interpreting the 'X properties in 1000' units of measurement in percentage terms and information was provided on the average number of properties in a Sydney suburb.

A 'cheap talk' script was included in each survey to minimise hypothetical bias. The script provided in the water interruptions questionnaire was as follows.

> **Answering questions about hypothetical situations**
>
> Research has shown that people tend to respond differently to hypothetical situations than they would in real life situations. This is most likely because they don't actually have to follow through with their choices in hypothetical situations. Although the situations presented in this survey are hypothetical, your responses will influence decisions about the management of the water system in Sydney, the Blue Mountains and the Illawarra, which will affect the number of water supply interruptions that happen and also the amount you pay for water. Therefore, please answer the questions as if you were really facing these decisions.

A list of debriefing questions was included to probe the respondent's decision-making process and gather information on their characteristics. The questions covered:

- the extent of any difficulty experienced when answering choice questions;
- perceptions of the accuracy of the 'current package' and feasibility of the service alternatives in the choice questions;
- the way respondents answered any questions with alternatives they perceived to be inaccurate or infeasible (where applicable);

- reasons for choosing the status quo alternative in all questions (where applicable);
- perceptions of how influential the survey would be on Sydney Water's decisions;
- the respondent's experience of water supply interruptions/wastewater overflows; and
- a range of socioeconomic/business characteristics.

Contingent valuation

In the CV surveys, we adopted the referendum (single dichotomous choice question) format in which the proposed program is offered to the respondent at a specified price and the respondent is asked whether they would vote for the program. Although this approach would appear to elicit very little about preferences and WTP from each individual respondent, it has been shown by more than two decades of academic research to be the most robust and rigorous of the available techniques. We decided against using an open-ended format in which respondents are directly asked their WTP or using follow-up questions with different price levels to narrow the respondent-specific information about WTP, since both approaches are known to introduce biases.

The questions for the three topics were as follows.

> While digital meters would deliver the benefits described in this survey, they may be more expensive than ordinary meters. We are interested in knowing if these benefits would be of value to you as a customer. If a program to install digital meters would permanently increase the amount you pay for water and wastewater services by *$X* per quarter would you vote for the program?
>
> Sydney Water could do a project to stop the daily release of raw wastewater from cliff face outfalls so that they instead release only when it rains. If this project added a one-off amount of *$X* to one of your water and wastewater bills, would you vote for the program?
>
> If a program to improve water pressure to 130 worst-served customers added a one-off amount of *$X* to one of your water and wastewater bills, would you vote for the program?

The vectors of levels that *$X* could take in each of the three topics are set out in table 3.6.

3.6 Price levels for contingent valuation questions

Topic	Payment vehicle	Price levels – citizens	Price levels – businesses
		$	Per cent
Digital meters	Permanent increase in the amount you pay for water and wastewater services per quarter	1, 3, 5, 7, 10, 15	0.5, 1.0, 1.5, 2.0, 3.0, 5.0
Wastewater outfalls	One-off amount added to one of your water and wastewater bills	1, 3, 5, 7, 10, 15, 25, 35, 50	Wave 1/2: 0.5, 1.0, 1.5, 2.0, 3.0, 5.0, 7.5, 10.0, 15.0 Wave 3: 25.0, 40.0
Water pressure	One-off amount added to one of your water and wastewater bills	1, 3, 5, 7, 10, 15	0.5, 1.0, 1.5, 2.0, 3.0, 5.0

Source: CIE

The response options to the valuation question were a simple yes/no in the initial Wave 1 fieldwork. Due to concerns about potential 'yea saying', we revised the response options to the following certainty scale in Wave 2.

At that cost to me, I definitely would vote for the program

At that cost to me, I probably would vote for the program

At that cost to me, I am not sure whether I would vote for the program

At that cost to me, I probably would not vote for the program

At that cost to me, I definitely would not vote for the program

A 'cheap talk' script was included immediately prior to each of the CV questions to mitigate hypothetical bias. The script told respondents that their answer would affect the decision about the relevant service outcomes and also the amount they pay for water and wastewater services. It also reminded respondents that their income is limited and there may be other things they want to pay for.

Following the CV questions, respondents were asked about the reasons for their decision, the extent to which they believed the survey would affect Sydney Water decisions and a range of questions about their characteristics.

4 The sample of customers

Recruitment

The fieldwork was conducted in August and September 2018. All respondents were sampled through the Pureprofile online panel and were compensated for their time through Pureprofile's rewards system, which offers cash, e-gift cards and movie tickets.

Businesses were identified by asking respondents whether they were a business owner or sole trader with a commercial premises or responsible for managing business operations at a commercial premises.

Citizens were screened out if they or anyone else in their household works in water supply and wastewater services, market research, for IPART, for NSW Health in a role related to water quality regulation or for the NSW Environment Protection Authority. Similarly, businesses were screened out if they operate in the water and wastewater service or market research industries.

Respondents were also screened out if they indicated that they do not pay Sydney Water bills or any amount for water and wastewater separate from rent. These respondents are not in a position to make the price-service trade-offs examined in this study, since they are unaffected by the payment vehicle.

Soft quotas were set using Australian Bureau of Statistics data for the 15 SA4 regions covering Sydney Water's operating area for age, gender and location of citizens and for employment size, industry and location of businesses.

4.1 Sample sizes

Survey	Wave 1	Wave 2	Wave 3	Total
	Citizens / Businesses	Citizens / Businesses	Citizens / Businesses	Citizens / Businesses
Water interruptions	117 / 35	88 / 34	577 / 250	782 / 319
Wastewater overflows	131 / 32	248 / 64	430 / 209	809 / 305
Digital meters	155 / 77	234 / 656	N/A	811 / 311
Ocean outfalls and water pressure	142 / 82	665 / 223	0 / 65	807 / 370

Source: CIE

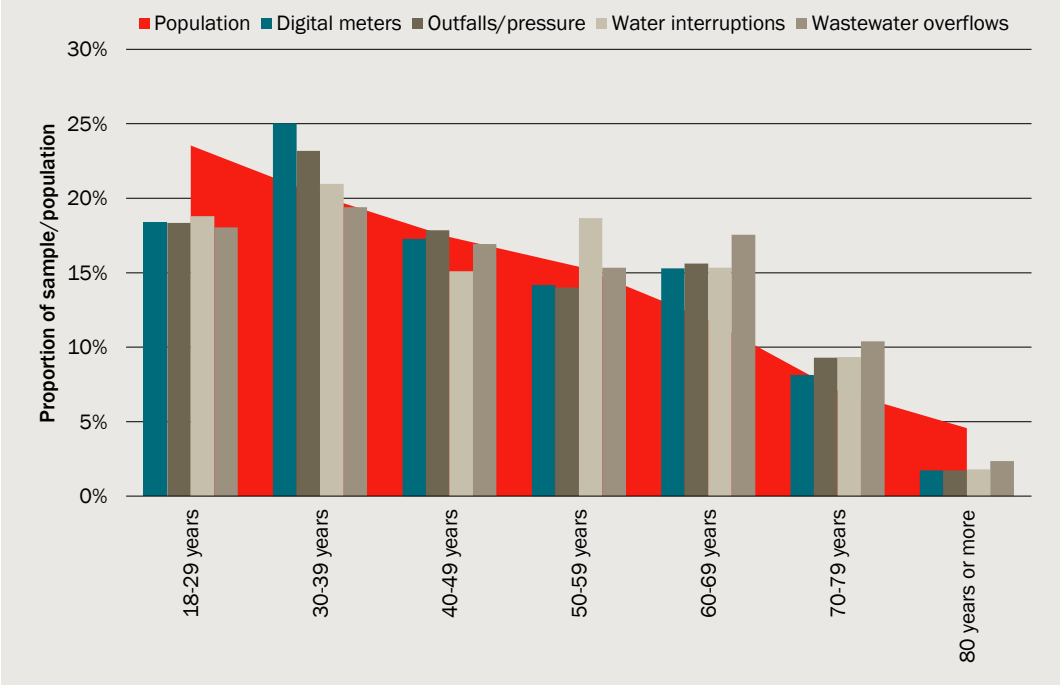
Citizens

The population for which we want a representative sample is the population of household decision makers. Data on the characteristics of this subset are not available. In this section we compare the characteristics of our sample with the full population of persons aged 18 and over in the Sydney Water operating area. Some differences in characteristics are expected as a result.

Age

The age profile of the sample is similar to that of the population. The undersampling of citizens aged under 30 years is expected since this group is less likely to be a decision maker within their household.

4.2 Citizen respondents by age

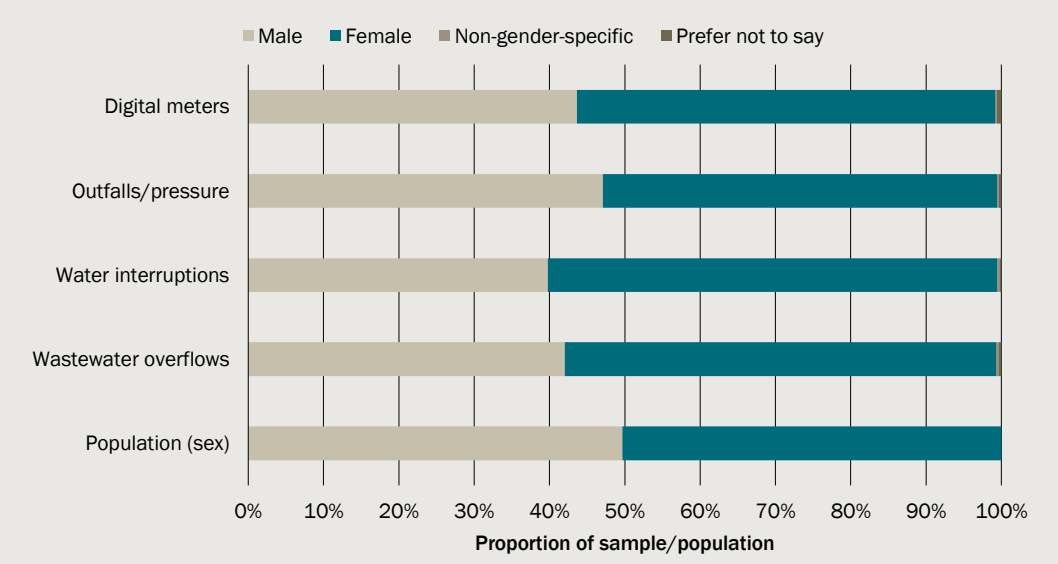


Note: n=811 in Digital Meters, n=807 in Outfalls/Pressure, n=782 in Water Interruptions, n=809 in Wastewater Overflows
Data source: CIE, ABS 3235.0

Gender

Females were slightly oversampled relative to males in all four surveys (see figure 4.3 on the following page).

4.3 Citizen respondents by gender

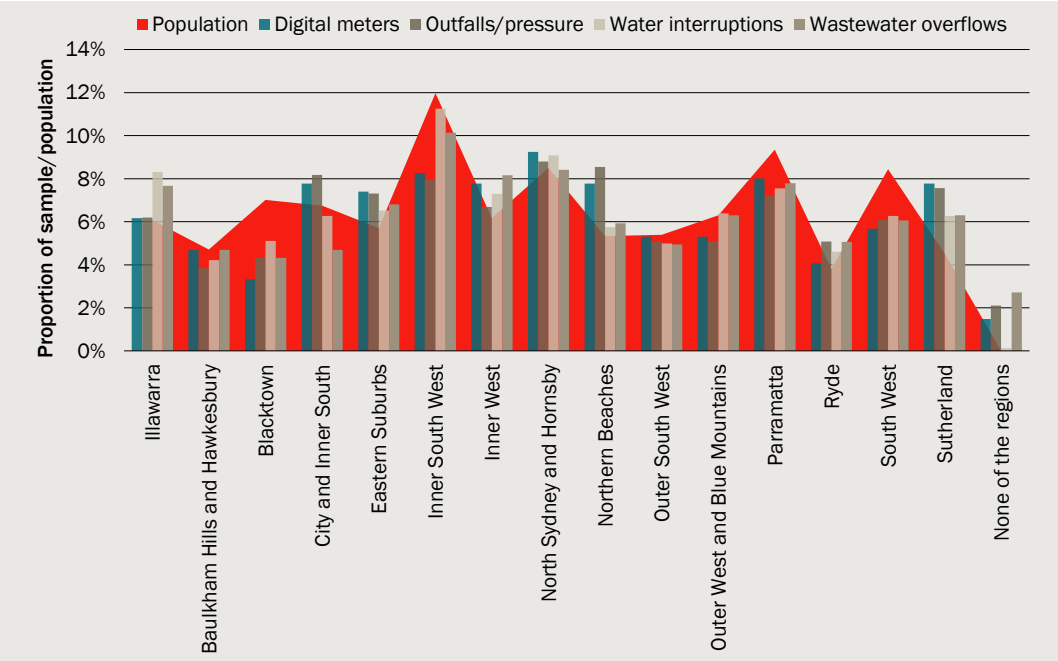


Note: n=811 in Digital Meters, n=807 in Outfalls/Pressure, n=782 in Water Interruptions, n=809 in Wastewater Overflows
Data source: CIE, ABS 3235.0

Location

Citizen respondents represent a good spread of locations across Sydney Water's operating area. The mix is similar to that of the population, with the exception of some undersampling in Blacktown and South West Sydney and some oversampling in Sutherland.

4.4 Citizen respondents by location



Note: n=811 in Digital Meters, n=807 in Outfalls/Pressure, n=782 in Water Interruptions, n=809 in Wastewater Overflows
Data source: CIE, ABS 3235.0

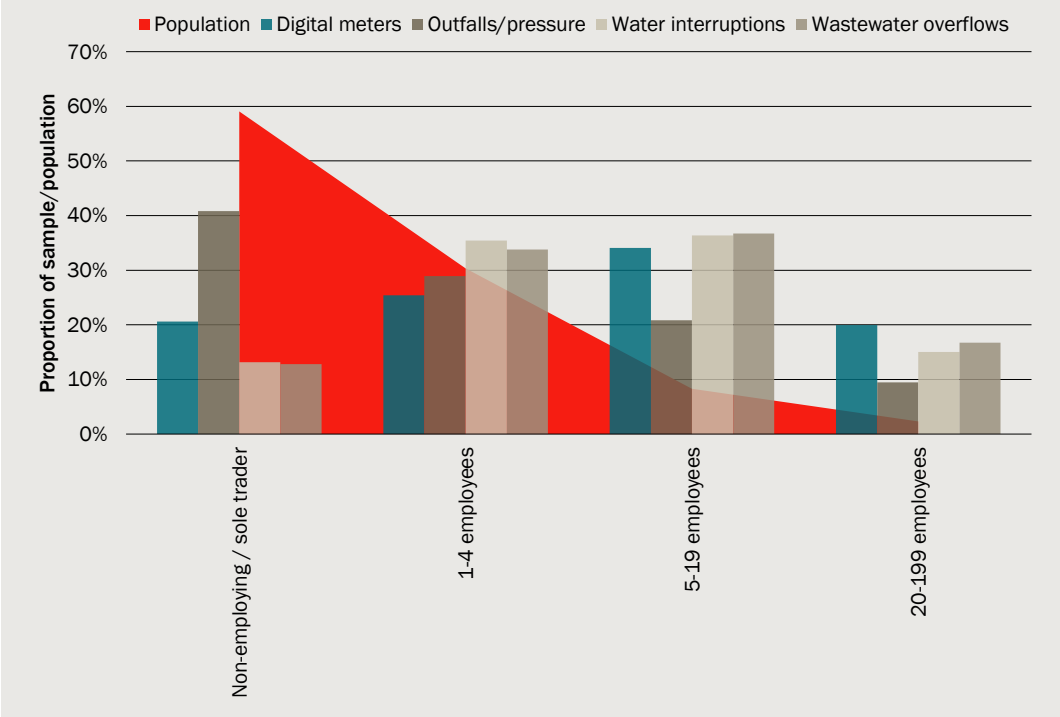
Businesses

The population for which we want a representative sample is the population of businesses operating on commercial premises, as distinct from businesses operating from home or solely on-site with clients. Data on the characteristics of this subset of businesses are not readily available. In this section we compare the characteristics of our sample of businesses with the full population of businesses in Sydney Water's operating area, regardless of whether they operate from commercial premises. Some differences in characteristics are expected as a result.

Employment size

Relative to the population of businesses sole traders were undersampled and medium businesses were oversampled. This is likely to be a reflection of the fact that we screened out businesses without a commercial premises and the difference may therefore reflect a more accurate sampling of the population of businesses with commercial premises.

4.5 Business respondents by employment size



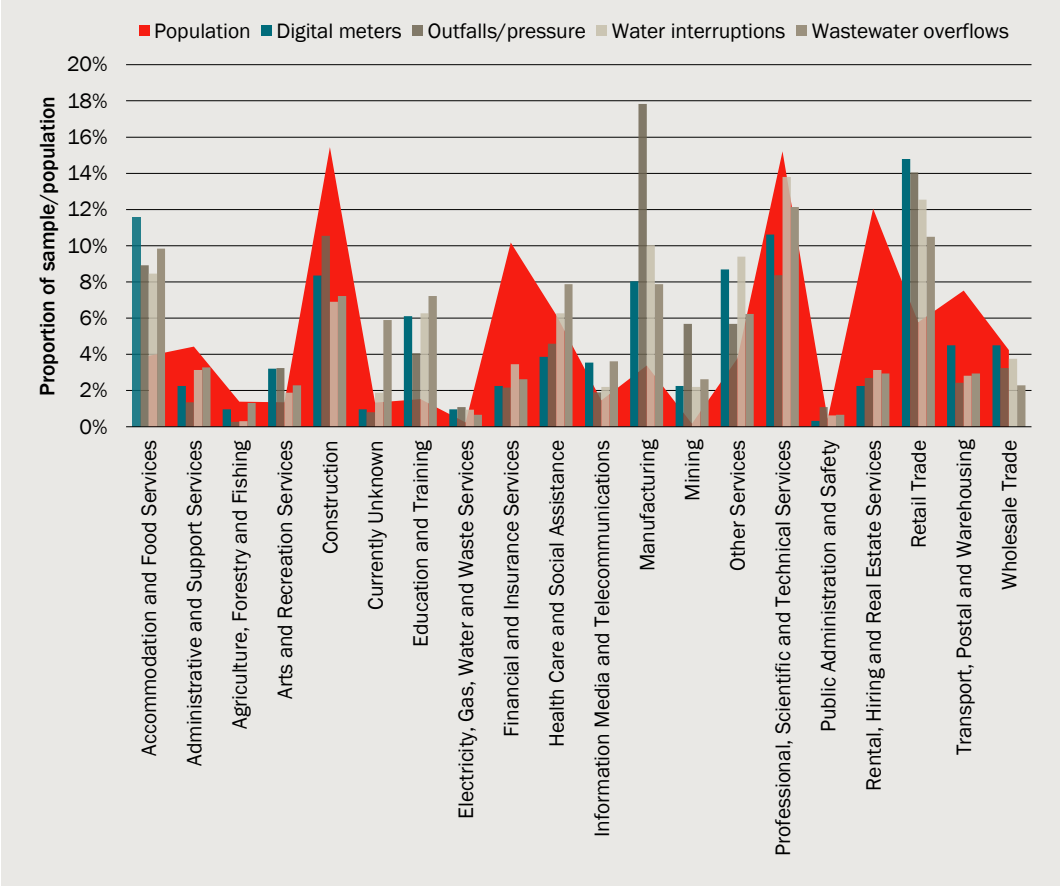
Note: n=311 in Digital Meters; n=370 in Outfalls/Pressure, n=319 in Water Interruptions, n=305 in Wastewater Overflows
Data source: CIE, ABS 8165.0

Industry

Sampling businesses by industry in proportions matching the underlying population proved difficult. Nevertheless, a range of industries are represented in the samples. Relative to the population of all businesses, manufacturing, retail trade and

accommodation and food services are overrepresented in the sample, while financial and insurance services and rental, hiring and real estate services are underrepresented.

4.6 Business respondents by industry

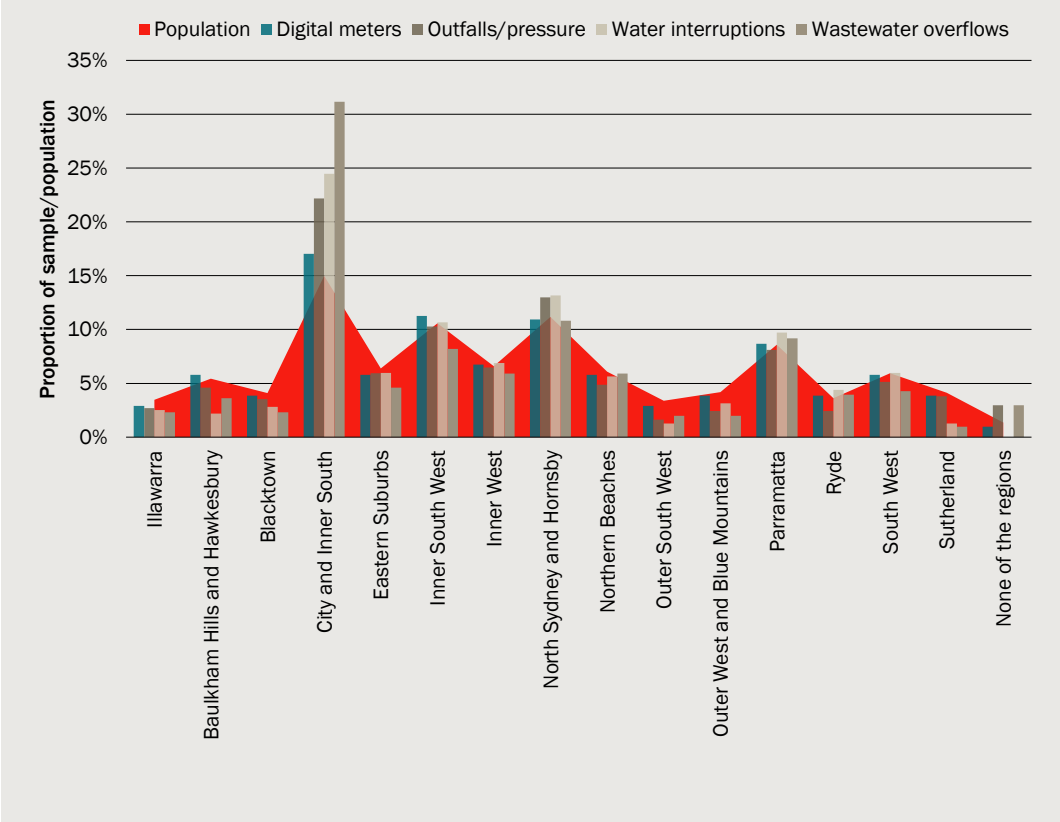


Note: n=311 in Digital Meters; n=370 in Outfalls/Pressure, n=319 in Water Interruptions, n=305 in Wastewater Overflows
Data source: CIE, ABS 8165.0

Location

The mix of business locations in the sample matches the mix in the population very closely, with the exception of some oversampling of businesses in the City and Inner South in the water interruptions and wastewater overflows surveys (see figure 4.7 on the following page).

4.7 Business respondents by location



Note: n=311 in Digital Meters; n=370 in Outfalls/Pressure, n=319 in Water Interruptions, n=305 in Wastewater Overflows

Data source: CIE, ABS 8165.0

5 Results – water supply interruptions

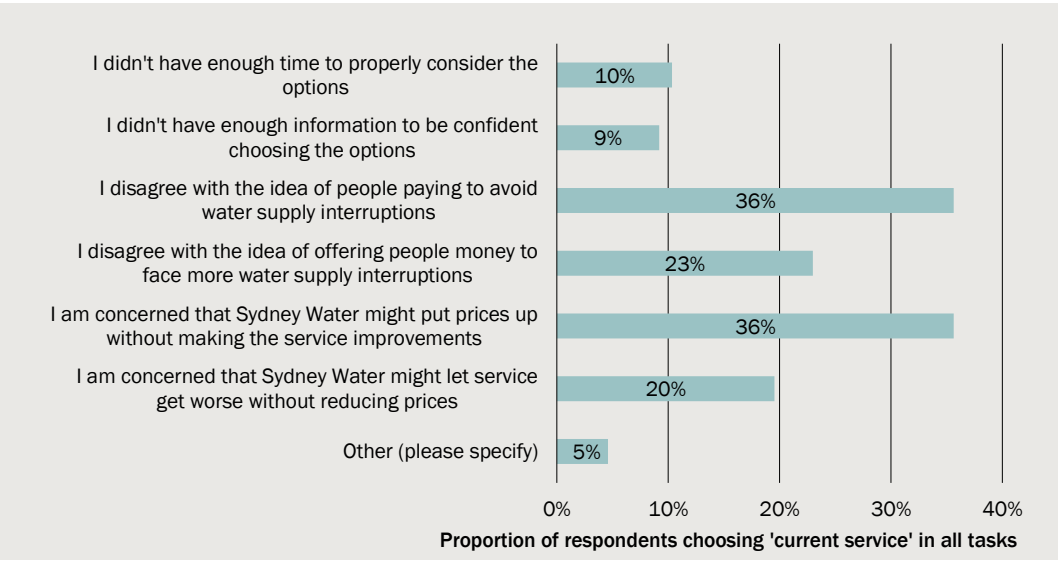
We estimated numerous models on the data to identify a final set of selected models that capture the most important relationships for the research questions. Alternative specifications that were estimated include:

- models for capturing unobserved heterogeneity, including mixed logit models;
- interactions between respondent characteristics and model parameters to capture observed heterogeneity;
- interactions between service attributes;
- asymmetric valuation of gains and losses; and
- non-linear (e.g. logarithmic) relationships between utility/WTP and service attributes.

The models chosen following this process are set out below.

The models of customer choice were estimated on data excluding respondents who chose the 'current service' option in all six of the choice tasks presented to them – some 87 respondents. This choice behaviour is called 'serial non-participation' and it indicates that respondents are not trading off the service and price attributes. The decision whether to include these respondents in the estimation primarily affects the magnitude of the 'status quo bias' estimated in the model. When conducting cost-benefit analysis, the analyst needs to decide whether to treat this apparent disutility from any change as a true welfare effect or a source of bias that needs to be excluded from welfare estimates. To assist with this decision, the reasons given by respondents for serial non-participation are shown in figure 5.1. Serial non-participation appears to have been motivated primarily by protest at the concept of price-service trade-offs and distrust of Sydney Water.

5.1 Reasons for serial non-participation in the water interruptions survey



Note: n=87 (respondents choosing 'current service' in all tasks

Data source: CIE

Models of customer choice

Households

Our selected model of household choice has the following features:

- Panel mixed multinomial logit model, with fixed parameters for cost-related attributes and random (normal distribution) parameters for service attributes, allowing for full correlation between the distributions of the random parameters.[2]
- The model does not include interactions between the service attributes presented in the choice tasks, since including interactions did not significantly improve model fit.
- Inclusion of an interaction between the cost variable with an indicator variable for whether the cost change is positive or negative, since there is strong evidence in support of asymmetry in WTP for service improvement and WTA compensation for service degradation.
- Linear relationships between WTP and each service attribute, except for the 'notice' attribute which entered the estimation as effects-coded variables to allow for non-linear utility over the number of hours of notice given for planned interruptions.

2 The state of the art in modelling DCE data is currently the panel mixed multinomial logit model estimated in WTP space. We decided against using this type of model as the primary model, since it cannot easily accommodate asymmetry in WTP for service improvement and WTA compensation for service degradation. This asymmetry was marked and had a considerable impact on estimates of average WTP in this study, consistent with previous findings in McNair and Scarpa (2016). In our view capturing this asymmetry is more important than finessing the estimation of unobserved heterogeneity in preferences in this study.

The model shows that:

- respondents made considered choices on the basis of the attribute levels presented, as evidenced by the relatively large z-values on the parameters estimates;
- respondents exhibited a bias towards the status quo on average, however, as one would expect, there is also evidence of significant heterogeneity in this preference, as evidenced by the standard deviation on the status quo constant being much larger than the mean;
- there is considerable variation in household preferences across all of the service attributes included in the choice tasks, as evidenced by the statistically significant estimates of standard deviation for the random parameters;
- respondents' WTP for service improvements is lower than the compensation they would require for the equivalent service degradation, as evidenced by the significant positive coefficient on the interaction variable between change in bill and the dummy variable for a bill increase (the asymmetry between gains and losses is a well-known phenomenon in consumer psychology); and
- male respondents are more cost-sensitive (i.e. have lower WTP) than other respondents.

5.2 Model of household choice of water interruptions scenarios

	Coefficient	Z value
Fixed parameters		
The permanent change in the amount you pay for water each year ($)	-0.1730	-12.68
Amount of notice given before water supply is turned off: 4 hours (effects coded =1 when 4 hours, =0 when 48 hours, =-1 when 24 hours)	-0.4629	-3.86
Amount of notice given before water supply is turned off: 48 hours (effects coded =1 when 48 hours, =0 when 4 hours, =-1 when 24 hours)	0.4694	4.41
Interactions with 'The permanent change in the amount you pay for water each year'		
x dummy variable for bill increase (=1 for bill increase, =0 otherwise)	0.1012	6.46
x dummy variable for male (=1 if male, =0 otherwise)	-0.0277	-3.83
Random parameters: means		
Alternative-specific constant (=1 for current package, =0 otherwise)	0.1841	2.65
Short unplanned interruptions: chance each year of an interruption lasting 1-3 hours (properties in 1000)	-0.0105	-6.88
Long unplanned interruptions: chance each year of an interruption lasting 6-8 hours (properties in 1000)	-0.0425	-9.98
Repeat unplanned interruptions: chance of experiencing three interruptions in a year (properties in 1000)	-0.0733	-7.46
Planned interruptions: chance each year of an interruption lasting 4-6 hours (properties in 1000)	-0.0222	-5.33
Random parameters: standard deviations		

	Coefficient	Z value
Alternative-specific constant (=1 for current package, =0 otherwise)	1.0525	16.65
Short unplanned interruptions: chance each year of an interruption lasting 1-3 hours (properties in 1000)	0.0185	8.44
Long unplanned interruptions: chance each year of an interruption lasting 6-8 hours (properties in 1000)	0.0473	4.18
Repeat unplanned interruptions: chance of experiencing three interruptions in a year (properties in 1000)	0.0591	1.41
Planned interruptions: chance each year of an interruption lasting 4-6 hours (properties in 1000)	0.0150	1.22
Random parameters: cross-parameter correlations		
ASC: Short unplanned interruptions	-0.0041	-2.41
ASC: Long unplanned interruptions	-0.0102	-1.65
ASC: Repeat unplanned interruptions	0.0058	0.43
ASC: Planned interruptions	0.0043	0.76
Short unplanned interruptions: Long unplanned interruptions	0.0403	3.73
Short unplanned interruptions: Repeat unplanned interruptions	0.0435	2.40
Short unplanned interruptions: Planned interruptions	0.0330	4.76
Long unplanned interruptions: Repeat unplanned interruptions	0.1131	4.74
Long unplanned interruptions: Planned interruptions	0.0042	0.47
Repeat unplanned interruptions: Planned interruptions	0.0074	0.56
Model fit		
Choice observations	4452	
Individuals	742	
Log likelihood	-4176	

Source: CIE

Businesses

The preferred choice model for business customers has the following features:

- Panel mixed multinomial logit model, with fixed parameters for cost-related attributes and random (normal distribution) parameters for service attributes, allowing for full correlation between the distributions of the random parameters.
- The cost attribute was defined as a proportion of the respondent's reported quarterly bill amount. This specification implies larger water users have higher WTP to avoid interruptions. No other business characteristics were included in the estimation, since none were found to be statistically significant when included as covariates.
- The model does not include interactions between the service attributes presented in the choice tasks, since including interactions did not significantly improve model fit.

- Inclusion of an interaction between the cost variable with an indicator variable for whether the cost change is positive or negative, since there is strong evidence in support of asymmetry in WTP for service improvement and WTA compensation for service degradation.
- Linear relationships between WTP and each service attribute, since logarithmic transformations did not improve model fit.

The model shows that:

- respondents made considered choices on the basis of the attribute levels presented, as evidenced by the z-values in excess of two on the parameters estimates for all attributes other than 'notice' which was included in choice tasks only for Wave 1 of the fieldwork;
- respondents' WTP for service improvements is lower than the compensation they would require for the equivalent service degradation, as evidenced by the significant positive coefficient on the interaction variable between change in bill and the dummy variable for a bill increase;
- with serial non-participators excluded, respondents evidenced some aversion to the status quo on average, however, there is significant heterogeneity in this preference, as evidenced by the standard deviation on the status quo constant being much larger than the mean; and
- there is variation in business preferences in relation to unplanned interruptions, as evidenced by the statistically significant estimate of standard deviation for the random parameters associated with short and long unplanned interruptions.

5.3 Model of business choice of water interruptions scenarios

	Coefficient	Z value
Fixed parameters		
The permanent change in the amount you pay for water each year (% of quarterly bill)	-19.5960	-4.98
Amount of notice given before water supply is turned off (hours)[a]	-0.0010	-0.12
Interactions with 'The permanent change in the amount you pay for water each year'		
x dummy variable for bill increase (=1 for bill increase, =0 otherwise)	9.4847	1.96
Random parameters: means		
Alternative-specific constant (=1 for current package, =0 otherwise)	-0.1893	-1.95
Short unplanned interruptions: chance each year of an interruption lasting 1-3 hours (properties in 1000)	-0.0069	-3.43
Long unplanned interruptions: chance each year of an interruption lasting 6-8 hours (properties in 1000)	-0.0136	-2.66
Repeat unplanned interruptions: chance of experiencing three interruptions in a year (properties in 1000)	-0.0336	-2.82
Planned interruptions: chance each year of an interruption lasting 4-6 hours (properties in 1000)	-0.0125	-2.18

	Coefficient	Z value
Random parameters: standard deviations		
Alternative-specific constant (=1 for current package, =0 otherwise)	0.8856	8.58
Short unplanned interruptions: chance each year of an interruption lasting 1-3 hours (properties in 1000)	0.0114	3.53
Long unplanned interruptions: chance each year of an interruption lasting 6-8 hours (properties in 1000)	0.0253	1.75
Repeat unplanned interruptions: chance of experiencing three interruptions in a year (properties in 1000)	0.0526	1.47
Planned interruptions: chance each year of an interruption lasting 4-6 hours (properties in 1000)	-0.0024	-0.08
Random parameters: cross-parameter correlations		
ASC: Short unplanned interruptions	-0.0023	-0.71
ASC: Long unplanned interruptions	-0.0130	-1.55
ASC: Repeat unplanned interruptions	-0.0137	-0.69
ASC: Planned interruptions	-0.0226	-2.32
Short unplanned interruptions: Long unplanned interruptions	0.0261	1.91
Short unplanned interruptions: Repeat unplanned interruptions	0.0218	0.55
Short unplanned interruptions: Planned interruptions	0.0146	0.98
Long unplanned interruptions: Repeat unplanned interruptions	0.0378	0.89
Long unplanned interruptions: Planned interruptions	-0.0284	-2.06
Repeat unplanned interruptions: Planned interruptions	0.0077	0.29
Model fit		
Choice observations	1830	
Individuals	305	
Log likelihood	-1909	

[a] Included in Wave 1 choice tasks only

Source: CIE

Estimates of average willingness to pay

Households

The estimates of average household WTP/WTA for both improvements and degradation in each of the service attributes are presented in table 5.5. Since the gender of the respondent had a statistically significant effect in the household model and males were undersampled relative to the underlying population, WTP estimates are calculated using the population mean for *male* of 0.497, rather than the sample mean of 0.417.

5.4 Household average WTP and WTA compensation for changes in water continuity

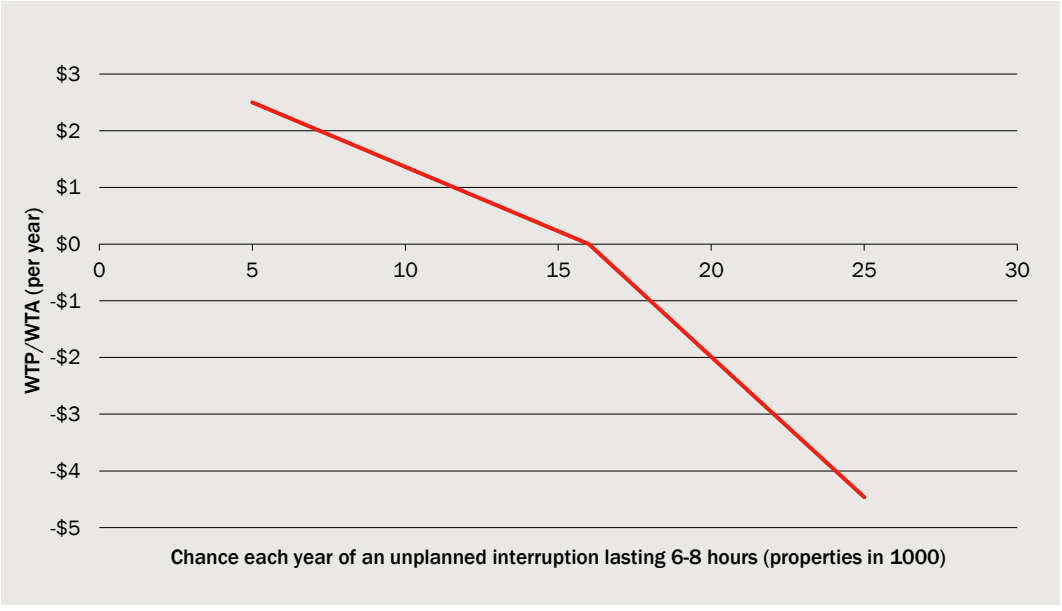
	Service improvement (WTP)	Service degradation (WTA)
	$ per year	$ per year
Change of 10 properties in 1000 in the chance of an unplanned interruption lasting 1-3 hours each year	$0.56 ($0.39, $0.73)	-$1.22 (-$1.57, -$0.88)
Change of 10 properties in 1000 in the chance of an unplanned interruption lasting 6-8 hours each year	$2.27 ($1.72, $2.82)	-$4.96 (-$5.98, -$3.94)
Change of 1 property in 1000 in the chance of experiencing three unplanned interruptions in a year	$0.39 ($0.28, $0.51)	-$0.86 (-$1.08, -$0.64)
Change of 10 properties in 1000 in the chance of a planned interruption lasting 4-6 hours each year	$1.19 ($0.76, $1.62)	-$2.59 (-$3.58, -$1.60)
Change in amount of notice given for planned interruptions from 24 hours to 48 hours	$2.51 ($1.39, $3.64)	
Change in amount of notice given for planned interruptions from 24 hours to 4 hours		-$5.41 (-$8.22, -$2.59)

Note: 95 per cent confidence intervals in parentheses, estimated at population mean for *male* = 0.497

Source: CIE

The asymmetry between WTP and WTA is illustrated in figure 5.6, which shows average household WTP/WTA compensation for changes in the likelihood of unplanned interruptions lasting 6-8 hours.

5.5 Household average WTP for changes in the chance each year of an unplanned interruption lasting 6-8 hours relative to a baseline of 16 in 1000 properties



Data source: CIE

Businesses

Estimates of average business WTP/WTA compensation for changes in each service attribute are set out in table 5.6. The confidence intervals on these estimates are wider than those on the household estimates as one would expect given the smaller sample size.

5.6 Business average WTP and WTA compensation for changes in water continuity

	Service improvement (WTP)	Service degradation (WTA)
	Percentage of annual bill	Percentage of annual bill
Change of 10 properties in 1000 in the chance of an unplanned interruption lasting 1-3 hours each year	0.09% (0.03%, 0.15%)	-0.17% (-0.27%, -0.07%)
Change of 10 properties in 1000 in the chance of an unplanned interruption lasting 6-8 hours each year	0.17% (0.02%, 0.32%)	0.34% (-0.59%, -0.08%)
Change of 1 property in 1000 in the chance of experiencing three unplanned interruptions in a year	0.04% (0.01%, 0.08%)	-0.08% (-0.14%, -0.03%)
Change of 10 properties in 1000 in the chance of a planned interruption lasting 4-6 hours each year	0.16% (0.02%, 0.30%)	-0.31% (-0.61%, -0.01%)

Note: 95 per cent confidence intervals in parentheses

Source: CIE

The model of business choice expresses WTP as a proportion of the respondent's bill, with larger water users having larger WTP. Table 5.7 uses a business customer with a quarterly water and wastewater bill of $300 (i.e. an annual bill of $1200) to provide an example of the dollar amounts that can be derived from the percentage estimates above.

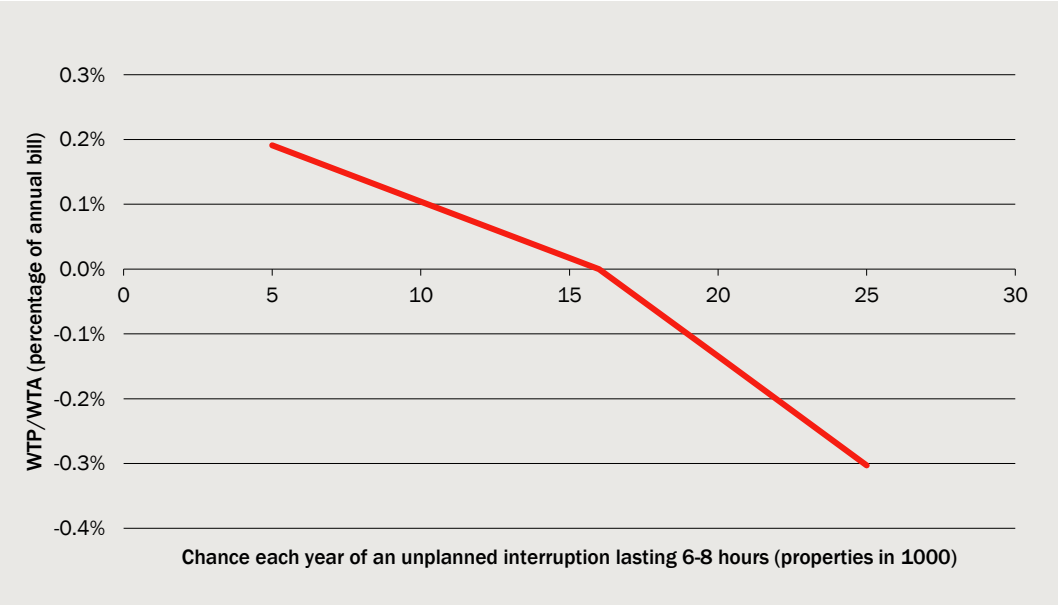
5.7 Business average WTP and WTA compensation for changes in water continuity

	Service improvement (WTP)	Service degradation (WTA)
	$ per year	$ per year
Change of 10 properties in 1000 in the chance of an unplanned interruption lasting 1-3 hours each year	$1.06	-$2.05
Change of 10 properties in 1000 in the chance of an unplanned interruption lasting 6-8 hours each year	$2.08	-$4.04
Change of 1 property in 1000 in the chance of experiencing three unplanned interruptions in a year	$0.52	-$1.00
Change of 10 properties in 1000 in the chance of a planned interruption lasting 4-6 hours each year	$1.91	-$3.69

Source: CIE

In the water interruptions models, there is a linear relationship between each service attribute and WTP/WTA. Values can therefore be calculated by interpolating or extrapolating using the figures above – though we would advise against extrapolating outside the range of levels used in the study. To illustrate this point, the relationship between WTP/WTA and the number of unplanned water interruptions lasting 6-8 hours is shown in figure 5.9.

5.8 Business average WTP for changes in the chance each year of an unplanned interruptions lasting 6-8 hours relative to a baseline of 16 in 1000 properties



Data source: CIE

Debriefing questions

There is no evidence that the cognitive burden of the survey was perceived by respondents as excessive. Only 7 per cent of respondents indicated the choice questions were very difficult, as distinct from somewhat difficult or not difficult.

Almost all respondents considered the choices on the basis of the attribute levels shown in the options. Only 4 per cent of respondents assumed that by selecting 'current package' they would get service levels they have experienced in the past, as distinct from the levels described in the question. Only 3 per cent indicated there was at least one question where they assumed they would be getting different service levels or bill impacts to those described in the options.

The survey was consequential for most respondents, with 80 per cent indicating they believe it is very likely or somewhat likely the survey will affect Sydney Water decisions.

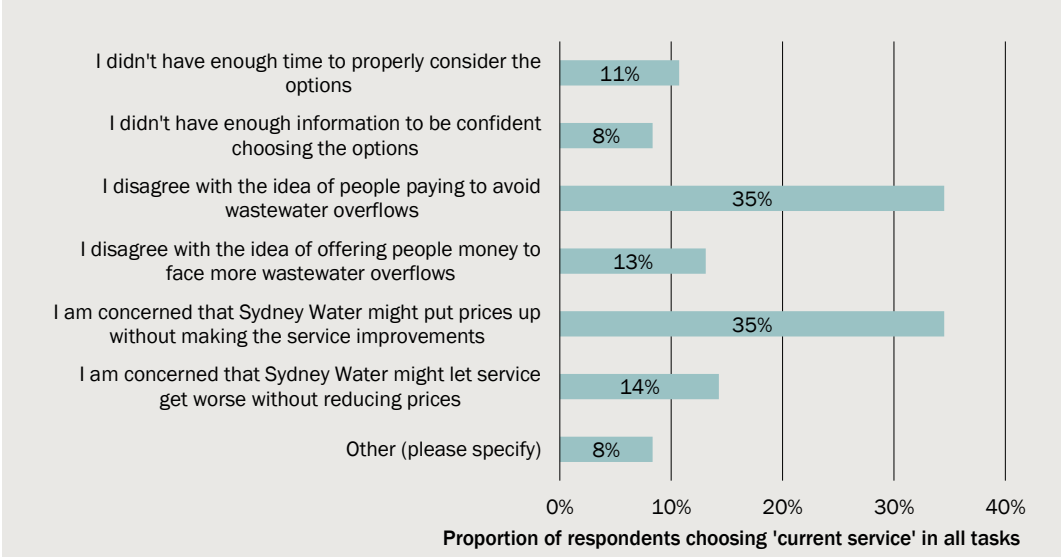
6 *Results – wastewater overflows*

As with the water interruptions estimation process described above, we estimated numerous models on the data to identify a final set of selected models that capture the most important relationships in the data and are representative of the results derived from a wider range of model specifications. Alternative specifications that were estimated include:

- models for capturing unobserved heterogeneity, including mixed logit models;
- interactions between respondent characteristics and model parameters to capture observed heterogeneity;
- interactions between service attributes, such as the chance and duration of wastewater overflows;
- asymmetric valuation of gains and losses; and
- non-linear (e.g. logarithmic) relationships between utility/WTP and service attributes.

The models chosen following this process are set out below. Consistent with the approach described in relation to the estimation of water interruptions choice models, we excluded 84 respondents evidencing 'serial non-participation'; that is, respondents who chose the 'current service' option in all six of the choice tasks presented to them. The reasons given by respondents for serial non-participation are shown in figure 6.1. Serial non-participation appears to have been motivated primarily by protest at the concept of price-service trade-offs and distrust of Sydney Water.

6.1 Reasons for serial non-participation in the wastewater overflows survey



Note: n=84 (respondents choosing the 'current service' option in all tasks

Data source: CIE

Models of customer choice

Households

In this section we present:

- a model including interactions with respondent characteristics that were found to be statistically significant (see table 6.2); and
- a model excluding interactions with respondent characteristics for the purpose of calculating average WTP (see table 6.3).

Both models have the following features:

- Panel mixed multinomial logit models, with fixed parameters for cost-related attributes and random (normal distribution) parameters for service attributes, allowing for full correlation between the distributions of the random parameters.
- The models do not include interactions between the service attributes presented in the choice tasks, since including interactions did not significantly improve model fit.
- Inclusion of an interaction between the cost variable with an indicator variable for whether the cost change is positive or negative, since there is strong evidence in support of asymmetry in WTP for service improvement and WTA compensation for service degradation.
- Logarithmic relationships to WTP for both the chance of repeat overflows and the time taken to address overflows and clean up.

The models show that:

- respondents made considered choices on the basis of the attribute levels presented, as evidenced by the large z-values on the parameters estimates for the service attributes;
- respondents' status quo bias was not significant on average, however, there is significant heterogeneity in this preference, as evidenced by the standard deviation on the status quo constant being much larger than the mean;
- there is considerable variation in household preferences in relation to all three of the service attributes, as evidenced by the statistically significant estimate of standard deviations for the random parameters associated with those attributes; and
- respondents' WTP for service improvements is dramatically lower than the compensation they would require for the equivalent service degradation, as evidenced by the highly significant positive coefficient on the interaction variable between change in bill and the dummy variable for a bill increase.

In addition, the model with respondent characteristics as covariates shows:

- respondents located in Baulkham Hills and Hawkesbury, Inner South West, or Parramatta are more cost-sensitive (i.e. have lower WTP) than other respondents;
- respondents who have experienced at least one wastewater overflow are less cost-sensitive (i.e. have higher WTP) than other respondents;
- younger respondents are less likely to choose the 'current service' option; and

- households with someone home during business hours most or all of the time are more likely to choose the 'current service' option.

6.2 Model of household choice of wastewater overflows scenarios with covariates

	Coefficient	Z value
Fixed parameters		
The permanent change in the amount you pay for wastewater services each year ($)	-0.1496	-14.64
Interactions with 'The permanent change in the amount you pay for wastewater services each year'		
x dummy variable for bill increase (=1 for bill increase, =0 otherwise)	0.1339	12.89
x dummy variable for location: Baulkham Hills and Hawkesbury	-0.0213	-3.62
x dummy variable for location: Inner South West	-0.0073	-1.98
x dummy variable for location: Outer South West	-0.0058	-1.10
x dummy variable for location: Parramatta	-0.0081	-1.79
x dummy for household income <$78 000 per year	-0.0035	-1.52
x dummy for past experience of at least one overflow	0.0080	3.44
Interactions with alternative-specific constant		
x dummy for aged under 30 years	-0.4329	-3.09
x dummy for male	-0.1565	-1.45
x dummy for someone home during business hours most/all of the time	0.2082	1.94
Random parameters: means		
Alternative-specific constant (=1 for current package)	0.1042	1.05
Chance of a wastewater overflow on your property each year (properties in 10 000)	-0.0135	-13.17
ln(1 + chance of three wastewater overflows on your property each year) (ln(1 = properties in 10 000))	-0.5135	-10.27
ln(time taken to stop overflow and clean affected area) (ln(hours))	-1.0840	-9.98
Random parameters: standard deviations		
Alternative-specific constant (=1 for current package)	0.9785	14.79
Chance of a wastewater overflow on your property each year (properties in 10 000)	-0.0163	-13.15
ln(1 + chance of three wastewater overflows on your property each year) (ln(1 + properties in 10 000))	0.4447	4.65
ln(time taken to stop overflow and clean affected area) (ln(hours))	1.1984	5.50
Random parameters: cross-parameter correlations		
ASC: chance of an overflow	-0.0031	-2.02
ASC: ln(1 + chance of repeat overflows)	-0.1982	-2.53
ASC: ln(time taken)	-0.1585	-0.98

	Coefficient	Z value
Chance of an overflow: ln(1 + chance of repeat overflows)	-0.4923	-6.44
Chance of an overflow: ln(time taken)	-0.3480	-2.13
ln(1 + chance of repeat overflows): ln(time taken)	0.9934	3.93
Model fit		
Choice observations	4428	
Individuals	738	
Log likelihood	-4271	

Source: CIE

6.3 Model of household choice of wastewater overflows scenarios without covariates

	Coefficient	Z value
Fixed parameters		
The permanent change in the amount you pay for wastewater services each year ($)	-0.1496	-14.88
Interactions with 'The permanent change in the amount you pay for wastewater services each year'		
x dummy variable for bill increase (=1 for bill increase, =0 otherwise)	0.1333	12.86
Random parameters: means		
Alternative-specific constant (=1 for current package)	0.0524	0.79
Chance of a wastewater overflow on your property each year (properties in 10 000)	-0.0134	-13.12
ln(1 + chance of three wastewater overflows on your property each year) (ln(1 = properties in 10 000))	-0.5175	-10.30
ln(time taken to stop overflow and clean affected area) (ln(hours))	-1.0808	-9.96
Random parameters: standard deviations		
Alternative-specific constant (=1 for current package)	1.0030	15.08
Chance of a wastewater overflow on your property each year (properties in 10 000)	0.0165	13.27
ln(1 + chance of three wastewater overflows on your property each year) (ln(1 + properties in 10 000))	0.4407	4.48
ln(time taken to stop overflow and clean affected area) (ln(hours))	1.1372	4.35
Random parameters: cross-parameter correlations		
ASC: chance of an overflow	-0.0030	-1.96
ASC: ln(1 + chance of repeat overflows)	-0.1955	-2.49
ASC: ln(time taken)	-0.1548	-0.95
Chance of an overflow: ln(1 + chance of repeat overflows)	0.5206	6.85
Chance of an overflow: ln(time taken)	0.3779	2.29

	Coefficient	Z value
ln(1 + chance of repeat overflows): ln(time taken)	1.0570	3.66
Model fit		
Choice observations	4428	
Individuals	738	
Log likelihood	-4296	

Source: CIE

Businesses

In this section we present two models estimated on the choices of business respondents:

- a model including interactions with respondent characteristics that were found to be statistically significant; and
- a model excluding interactions with respondent characteristics for the purpose of calculating average WTP.

Both models have the following features:

- Panel mixed multinomial logit models, with fixed parameters for cost-related attributes and random (normal distribution) parameters for service attributes, allowing for full correlation between the distributions of the random parameters.
- The models do not include interactions between the service attributes presented in the choice tasks, since including interactions did not significantly improve model fit.
- Inclusion of an interaction between the cost variable with an indicator variable for whether the cost change is positive or negative, since there is strong evidence in support of asymmetry in WTP for service improvement and WTA compensation for service degradation.
- A logarithmic relationship between WTP and repeat overflows. Other non-linear transformations tested did not improve model fit.

The models show that:

- respondents made considered choices on the basis of the attribute levels presented, as evidenced by the large z-values on the parameters estimates for the service attributes;
- after exclusion of serial non-participants, businesses were averse to the 'current service' option, however, there is significant heterogeneity in this preference, as evidenced by the standard deviation on the status quo constant being larger than the mean;
- there is considerable variation in business preferences in relation to all three of the service attributes, as evidenced by the statistically significant estimate of standard deviations for the random parameters associated with those attributes; and
- businesses' WTP for service improvements is dramatically lower than the compensation they would require for the equivalent service degradation, as evidenced by the highly significant positive coefficient on the interaction variable between change in bill and the dummy variable for a bill increase.

In addition, the model with respondent characteristics as covariates shows that respondents who have experienced an overflow are less cost-sensitive (i.e. have higher WTP) than other respondents.

6.4 Model of business choice of wastewater overflows scenarios with covariates

	Coefficient	Z value
Fixed parameters		
The permanent change in the amount you pay for wastewater services each year (% of quarterly bill)	-23.8524	-6.84
Interactions with 'The permanent change in the amount you pay for wastewater services each year'		
x dummy variable for bill increase (=1 for bill increase, =0 otherwise)	20.4652	5.75
x dummy variable for experience of an overflow	1.8850	2.32
Random parameters: means		
Alternative-specific constant (=1 for current package)	-0.5785	-5.98
Chance of a wastewater overflow on your property each year (properties in 10 000)	-0.0074	-5.96
ln(1 + chance of three wastewater overflows on your property each year) (ln(1 + properties in 10 000))	-0.2553	-3.92
Time taken to stop overflow and clean affected area (hours)	-0.1387	-4.80
Random parameters: standard deviations		
Alternative-specific constant (=1 for current package)	0.7488	6.98
Chance of a wastewater overflow on your property each year (properties in 10 000)	-0.0124	-7.79
ln(1 + chance of three wastewater overflows on your property each year) (ln(1 = properties in 10 000))	0.5425	5.24
Time taken to stop overflow and clean affected area (hours)	0.1474	2.38
Random parameters: cross-parameter correlations		
ASC: chance of an overflow	-0.0018	-0.81
ASC: ln(1 + chance of repeat overflows)	-0.0434	-0.36
ASC: Time taken	0.0111	0.22
Chance of an overflow: ln(1 + chance of repeat overflows)	-0.0355	-0.30
Chance of an overflow: Time taken	-0.0331	-0.66
ln(1 + chance of repeat overflows): Time taken	0.1721	3.43
Model fit		
Choice observations	1752	
Individuals	292	
Log likelihood	-1798	

Source: CIE

6.5 Model of business choice of wastewater overflows scenarios without covariates

	Coefficient	Z value
Fixed parameters		
The permanent change in the amount you pay for wastewater services each year (% of quarterly bill)	-22.5566	-6.56
Interactions with 'The permanent change in the amount you pay for wastewater services each year'		
x dummy variable for bill increase (=1 for bill increase, =0 otherwise)	20.3006	5.71
Random parameters: means		
Alternative-specific constant (=1 for current package)	-0.5732	-5.93
Chance of a wastewater overflow on your property each year (properties in 10 000)	-0.0073	-5.94
ln(1 + chance of three wastewater overflows on your property each year) (ln(1 + properties in 10 000))	-0.2541	-3.89
Time taken to stop overflow and clean affected area (hours)	-0.1389	-4.77
Random parameters: standard deviations		
Alternative-specific constant (=1 for current package)	0.7482	6.94
Chance of a wastewater overflow on your property each year (properties in 10 000)	0.0123	7.72
ln(1 + chance of three wastewater overflows on your property each year) (ln(1 = properties in 10 000))	0.5434	5.15
Time taken to stop overflow and clean affected area (hours)	0.1645	2.97
Random parameters: cross-parameter correlations		
ASC: chance of an overflow	-0.0018	-0.84
ASC: ln(1 + chance of repeat overflows)	-0.0485	-0.39
ASC: Time taken	0.0046	0.09
Chance of an overflow: ln(1 + chance of repeat overflows)	0.0339	0.28
Chance of an overflow: Time taken	0.0299	0.59
ln(1 + chance of repeat overflows): Time taken	0.1691	3.34
Model fit		
Choice observations	1752	
Individuals	292	
Log likelihood	-1800	

Source: CIE

Estimates of average willingness to pay

Households

The estimates of average household WTP/WTA for both improvements and degradation in each of the wastewater overflows service attributes are presented in table 6.6.

6.6 Household average WTP and WTA compensation for changes in wastewater overflows

	Service improvement (WTP)	Service degradation (WTA)
	$ per year	$ per year
Change of 10 in 10 000 properties in the chance each year of a wastewater overflow on your property	$0.90 ($0.74, $1.06)	-$8.21 (-$9.80, -$6.63)
Change of 1 in 10 000 properties (from a base of 1 in 10 000 properties per year) in the chance each year of experiencing three wastewater overflows on your property	$2.40 ($1.88, $2.92)	-$12.82 (-$15.56, -$10.08)
Change of one hour (from a base of five hours) in the time taken to stop overflow and clean the affected area	$1.61 ($1.26, $1.96)	-$12.04 (-$14.66, -$9.42)

Note: 95 per cent confidence intervals in parentheses

Source: CIE

The number of wastewater overflows has linear relationships with WTP and WTA, allowing interpolation and extrapolation using the figures above (however we would advise against extrapolating beyond the range of levels used in the study). These relationships and the striking asymmetry between WTP and WTA are illustrated in figure 6.7. Interpolation and extrapolation is not so simple for the *repeat* and *time* attributes above, since they enter the model with a logarithmic transformation. WTP/WTA estimates for changes in these attributes should be calculated using the model coefficients.

6.7 Household average WTP for changes in the chance of wastewater overflows relative to a baseline of 50 properties in 10 000

Data source: CIE

Businesses

The estimates of average business WTP/WTA for both improvements and degradation in each of the wastewater overflows service attributes are presented in table 6.8.

6.8 Business average WTP and WTA compensation for changes in wastewater overflows

	Service improvement (WTP)	Service degradation (WTA)
	% of annual bill	% of annual bill
Change of 10 in 10 000 properties in the chance each year of a wastewater overflow on your property	0.08% (0.05%, 0.11%)	-0.81% (-1.20%, -0.42%)
Change of 1 in 10 000 properties (from a base of 1 in 10 000 properties per year) in the chance each year of experiencing three wastewater overflows on your property	0.20% (0.09%, 0.30%)	-1.14% (-1.81%, -0.47%)
Change of one hour (from a base of five hours) in the time taken to stop overflow and clean the affected area	0.15% (0.09%, 0.22%)	-1.54% (-2.32%, -0.76%)

Note: 95 per cent confidence intervals in parentheses

Source: CIE

The model of business choice expresses WTP as a proportion of the respondent's bill, so that larger water users have larger WTP. Table 6.9 uses a business customer with a quarterly water and wastewater bill of $300 (i.e. an annual bill of $1200) to provide an example of the dollar amounts that can be derived from the percentage estimates above.

6.9 Business WTP and WTA compensation for changes in wastewater overflows estimated at median bill level

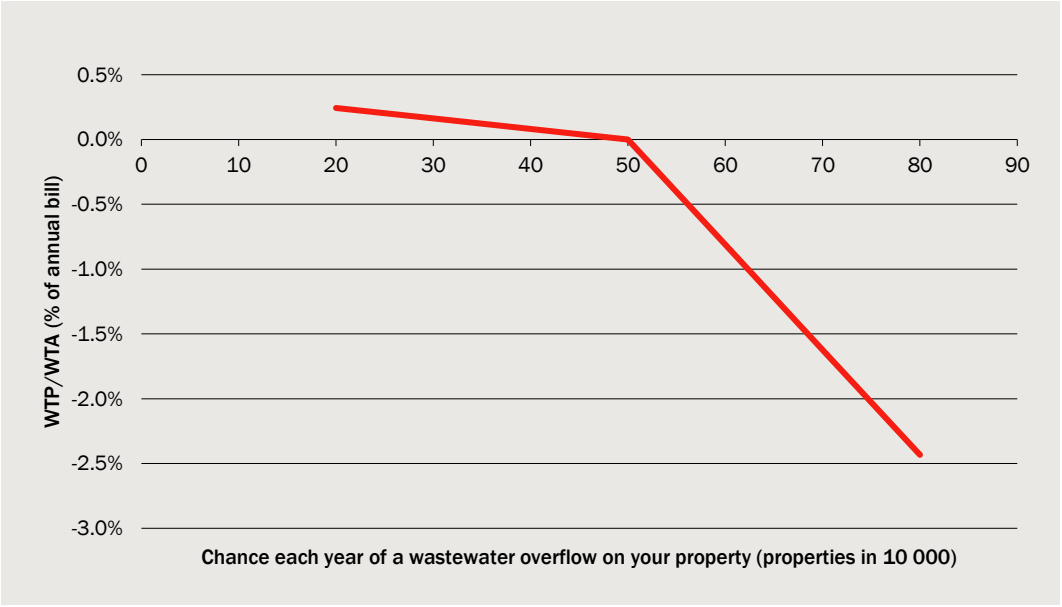
	Service improvement (WTP)	Service degradation (WTA)
	$ per year	$ per year
Change in chance of a wastewater overflow on your property by 10 in 10 000 properties	$0.97 ($0.60, $1.35)	-$9.73 (-$14.43, -$5.04)
Change in chance of experiencing three wastewater overflows on your property each year by 1 in 10 000 properties	$2.34 ($1.07, $3.61)	-$13.70 (-$21.77, -$5.64)
Change in the time taken to stop overflow and clean affected area by one hour	$1.85 ($1.04, $2.66)	-$18.48 (-$27.82, -$9.13)

Note: Estimated at median bill in the sample; 95 per cent confidence intervals in parentheses

Source: CIE

As in the household model, the number of wastewater overflows has linear relationships with business WTP and WTA, allowing interpolation and extrapolation using the figures above (however we would advise against extrapolating beyond the range of levels used in the study). These relationships and the striking asymmetry between WTP and WTA are illustrated in figure 6.10.

6.10 Business average WTP for changes in the chance of overflows relative to a baseline of 50 properties in 10 000



Data source: CIE

Debriefing questions

There is no evidence that the cognitive burden of the survey was perceived by respondents as excessive. Only 7 per cent of respondents indicated the choice questions were very difficult, rather than somewhat difficult or not difficult.

Almost all respondents considered the choices on the basis of the attribute levels shown in the options. Only 4 per cent of respondents assumed that by selecting 'current package' they would get service levels they have experienced in the past, as distinct from the levels described in the question. Only 3 per cent indicated there was at least one question where they assumed they would be getting different service levels or bill impacts to those described in the options.

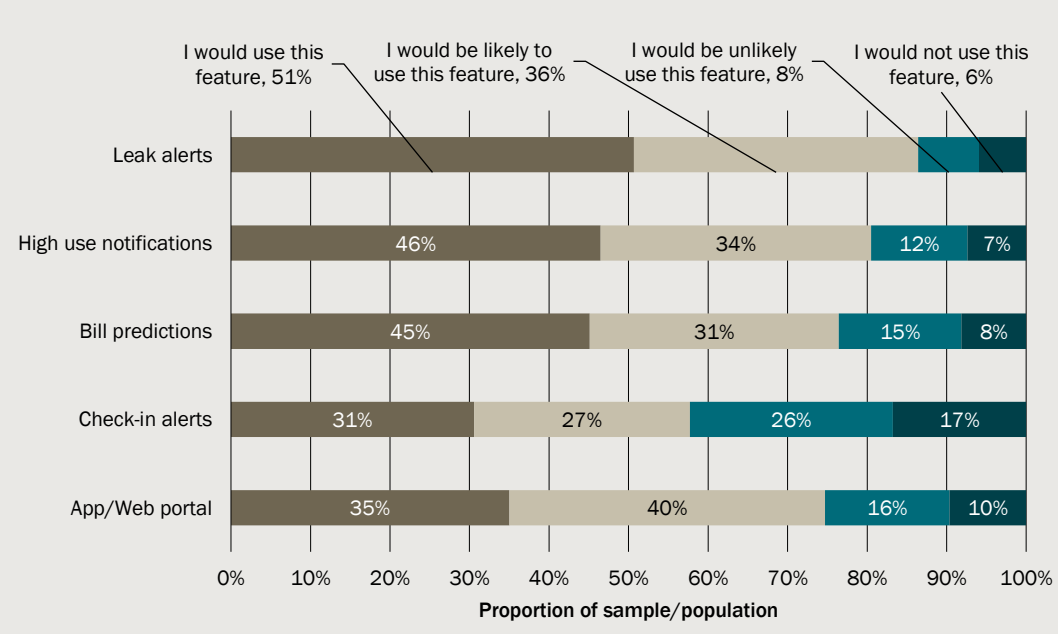
The survey was consequential for most respondents, with 77 per cent indicating they believe it is very likely or somewhat likely the survey will affect Sydney Water decisions.

7 Results – digital meters

Preferences for notification and website features

The survey results indicate that all of the features enabled by digital meters would be highly utilised (see figures 7.1 and 7.2). Businesses would be more likely to use the features than citizens, with over 90 per cent indicating they would or would be likely to use four of the five features, compared to 75-85 per cent for citizens. The least favoured feature was the check-in alerts, which 42 per cent of citizens and 18 per cent of businesses indicated they would not use or would be unlikely to use.

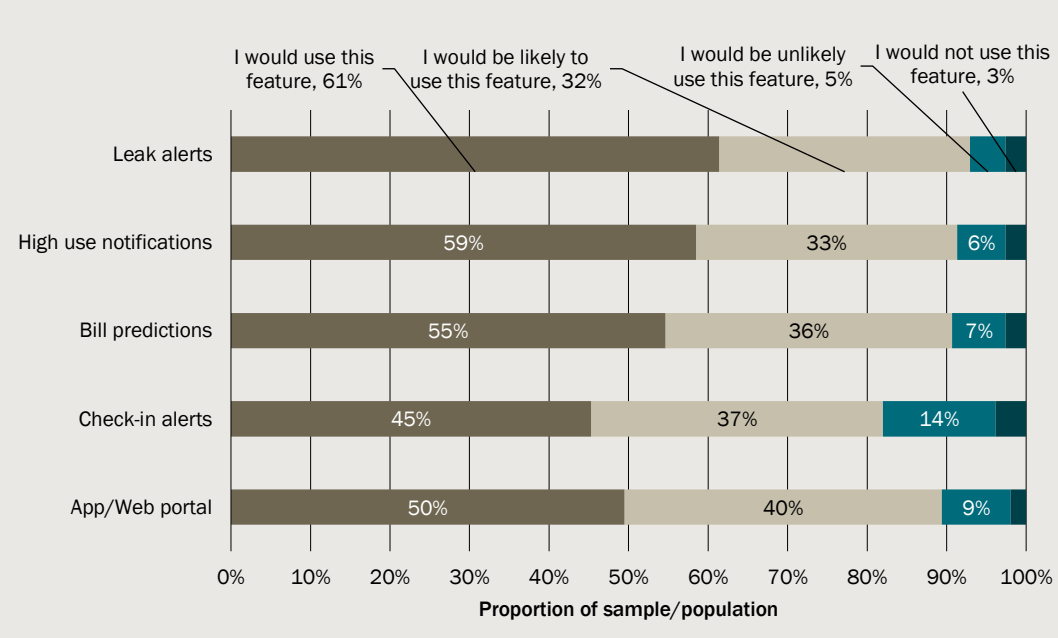
7.1 Citizen preferences for features enabled by digital meters



Note: n=811

Data source: CIE

7.2 Business preferences for features enabled by digital meters



Note: n=311

Data source: CIE

Responses to valuation questions

Households

Citizens responding on behalf of their households clearly gave consideration to the cost at which the digital metering program was offered, with acceptance levels generally decreasing with cost (see table 7.3 and figure 7.4).

It is likely a majority of citizens would support digital meters and associated features at a cost to them of $3 per quarter. At $10 per quarter, the number of respondents indicating they would or probably would vote for a digital metering program is similar to the number of respondents indicating they would not or probably would not vote for a program. A program costing $15 per quarter is unlikely to be supported by citizens.

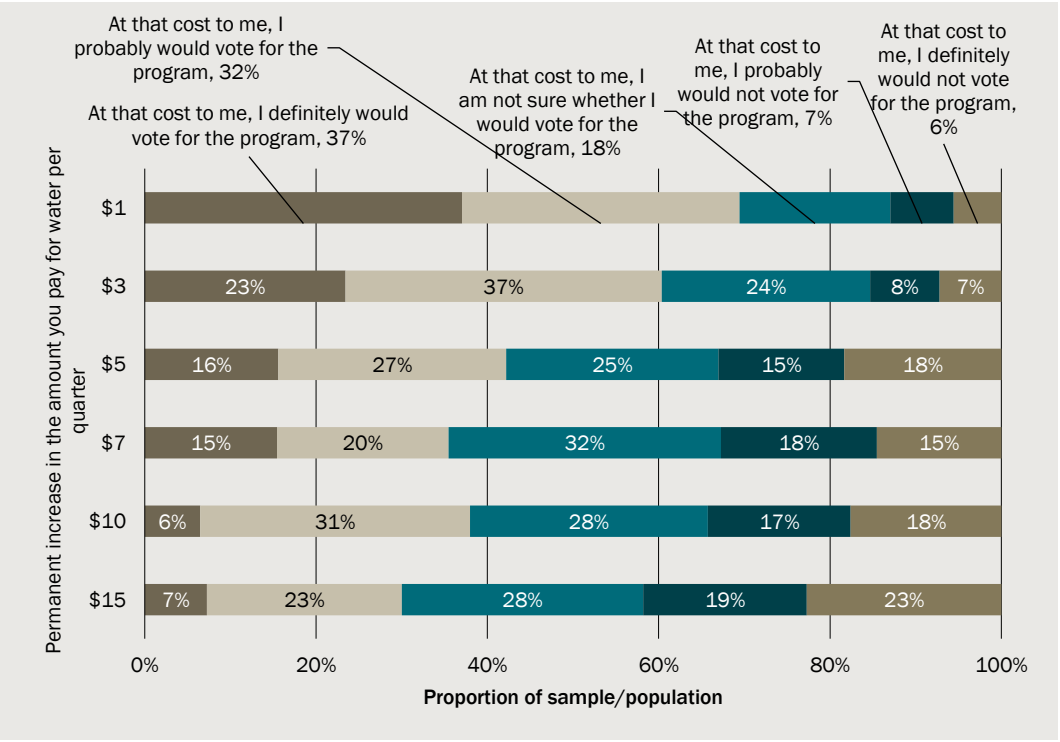
7.3 Citizen responses to digital meters contingent valuation question

	Wave 1		Wave 2				
	Yes	No	At that cost to me, I definitely would vote for the program	At that cost to me, I probably would vote for the program	At that cost to me, I am not sure whether I would vote for the program	At that cost to me, I probably would not vote for the program	At that cost to me, I definitely would not vote for the program
	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.
$1	14	13	40	35	19	8	6
$3	21	4	26	41	27	9	8
$5	16	10	17	29	27	16	20
$7	14	11	17	22	35	20	16
$10	14	13	7	34	30	18	19
$15	6	19	8	25	31	21	25

Note: n=811

Source: CIE

7.4 Citizen responses to digital meters contingent valuation question



Note: n=656 (Wave 2)

Data source: CIE

Parametric approaches are not used to estimate WTP in this study, since the results are highly sensitive to specification and also infer negative WTP for many respondents. However, in the course of estimating probit models we identified several respondent characteristics that are related to WTP. We found citizens were more likely to vote yes if

located in Blacktown, Inner South West, Outer South West, Outer West and Blue Mountains, Parramatta or South West. Citizens were less likely to vote yes if they were a home owner.

Businesses

Businesses were more supportive of digital meters than citizens, with very few businesses indicating they would vote against a digital metering program, even at the highest cost level included in the study of 5 per cent of their water and wastewater bill (see table 7.5 and figure 7.6).

7.5 Business responses to digital meters contingent valuation question

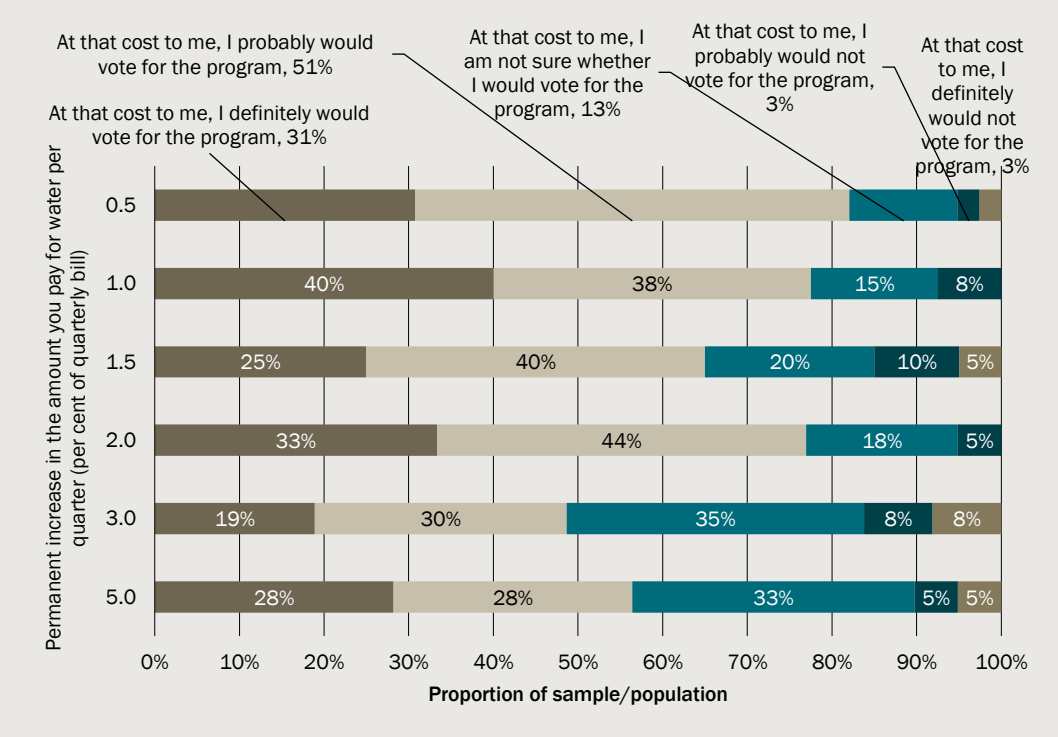
	Wave 1		Wave 2				
	Yes	No	At that cost to me, I definitely would vote for the program	At that cost to me, I probably would vote for the program	At that cost to me, I am not sure whether I would vote for the program	At that cost to me, I probably would not vote for the program	At that cost to me, I definitely would not vote for the program
	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.
0.5%	10	3	12	20	5	1	1
1.0%	10	2	16	15	6	3	0
1.5%	10	2	10	16	8	4	2
2.0%	10	3	13	17	7	2	0
3.0%	8	6	7	11	13	3	3
5.0%	7	6	11	11	13	2	2

Note: n=311

Source: CIE

The probit models estimated on the data did not indicate any statistically significant relationships between business characteristics and WTP.

7.6 Business responses to digital meters contingent valuation question



Note: n=234 (Wave 2)

Data source: CIE

Estimates of average willingness to pay

Households

The lower-bound robust non-parametric Turnbull estimator for mean WTP is $3.02 per household per quarter. This was calculated by treating each 'At that cost to me, I probably would vote for the program' response as a 'no' vote. This is a conservative approach adopted to counter concerns that CV studies tend to overestimate WTP due to hypothetical bias and yea-saying. A less conservative estimate in which the 'probably yes' response is treated as yes vote at the next lowest price level in the price vector (e.g. probably yes at a cost of $15 is treated as definitely yes at a cost of $10) results in a lower-bound estimate of mean WTP of $4.78 per household per quarter.

Businesses

The lower-bound robust non-parametric Turnbull estimators for mean WTP are:

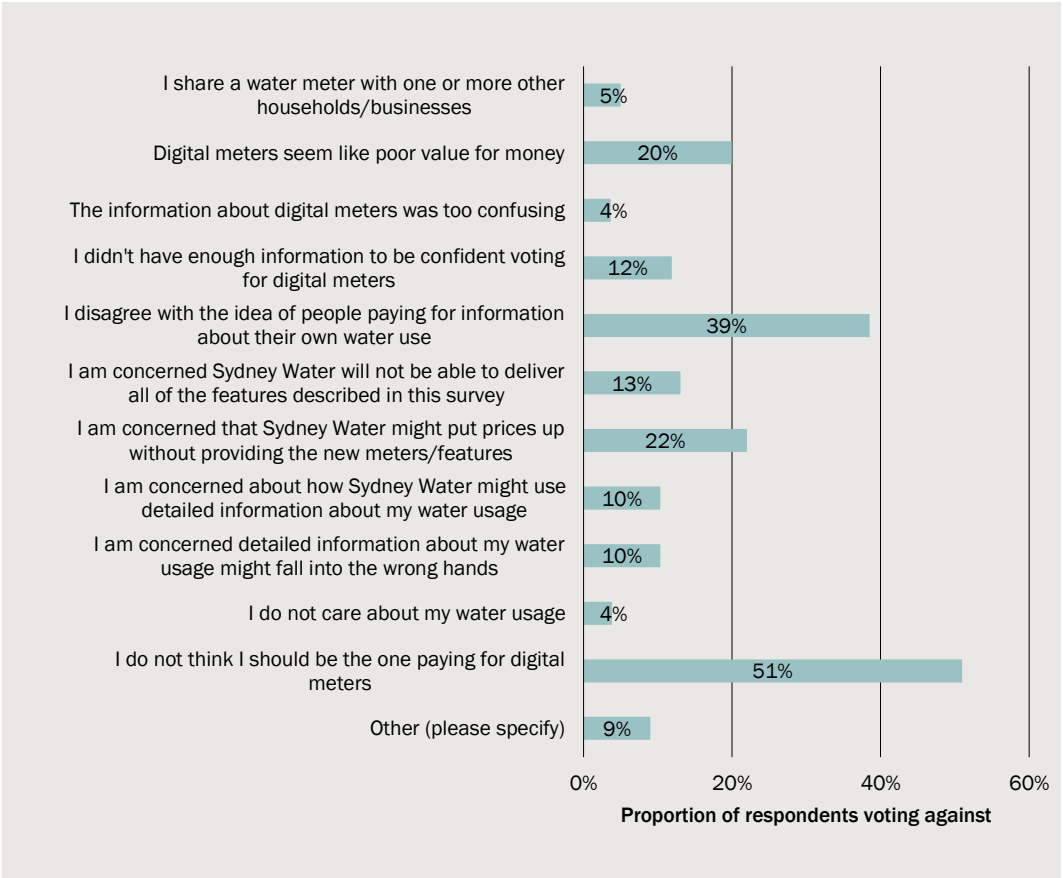
- a permanent increase of 1.12 per cent in business customer bills, if each 'At that cost to me, I probably would vote for the program' response is treated as a 'no' vote. This equates to $3.75 per quarter at the median quarterly bill reported by businesses in this survey of $333.

- a permanent increase of 2.50 per cent on business customer bills if each 'At that cost to me, I probably would vote for the program' response is treated as a 'yes' vote at the next lowest price level in the price vector than the level offered in the question. This equates to $8.31 per quarterly bill at the median bill level reported in the survey.

Debriefing questions

When respondents voted 'no' to a digital metering program, the most common reason given was 'I do not think I should be the one paying for digital meters', followed by 'I disagree with the idea of people paying for information about their water use'. The top four reasons given all relate to the cost to the respondent in some way.

7.7 Reasons given for voting against digital meters

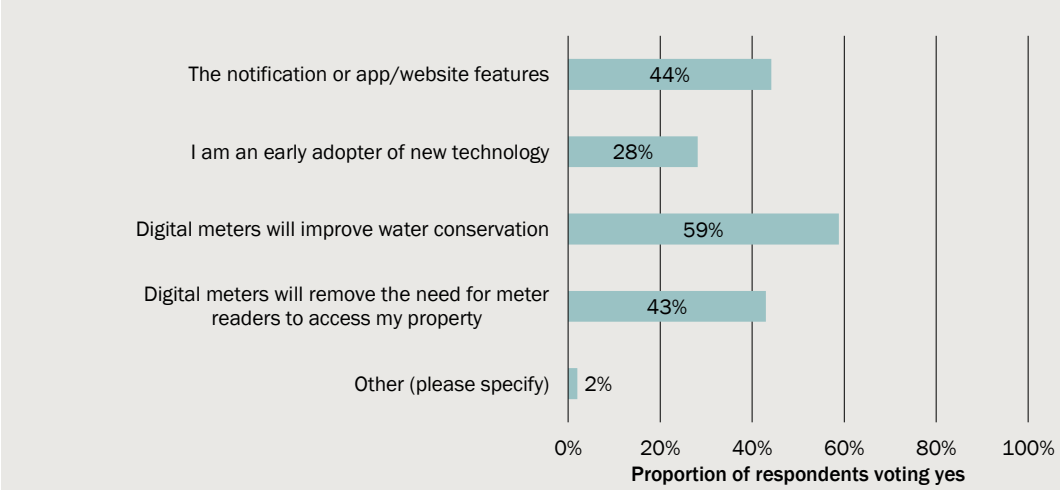


Note: n=522 (respondents voting 'no', 'I am not sure...', 'I probably would not...' or 'I definitely would not...')

Data source: CIE

When respondents voted for the digital metering program, the most common reason given was 'Digital meters will improve water conservation'. This ranked ahead of the information service features and removing the need for meter readers.

7.8 Reasons given for voting for digital meters



Note: n=600 (respondents voting 'yes', 'I definitely would…' or 'I probably would…')

Data source: CIE

Most respondents indicated the survey was consequential, with 33 per cent indicating they believe it is very likely and a further 51 per cent indicating they believe it is somewhat likely that the survey will affect Sydney Water's decisions.

8 Results – ocean wastewater outfalls

Responses to valuation questions

Households

Citizens responding on behalf of their households clearly gave consideration to the cost at which the ocean outfalls project was offered, with acceptance levels generally decreasing with cost (see table 8.1 and figure 8.2).

8.1 Citizen responses to ocean outfalls contingent valuation question

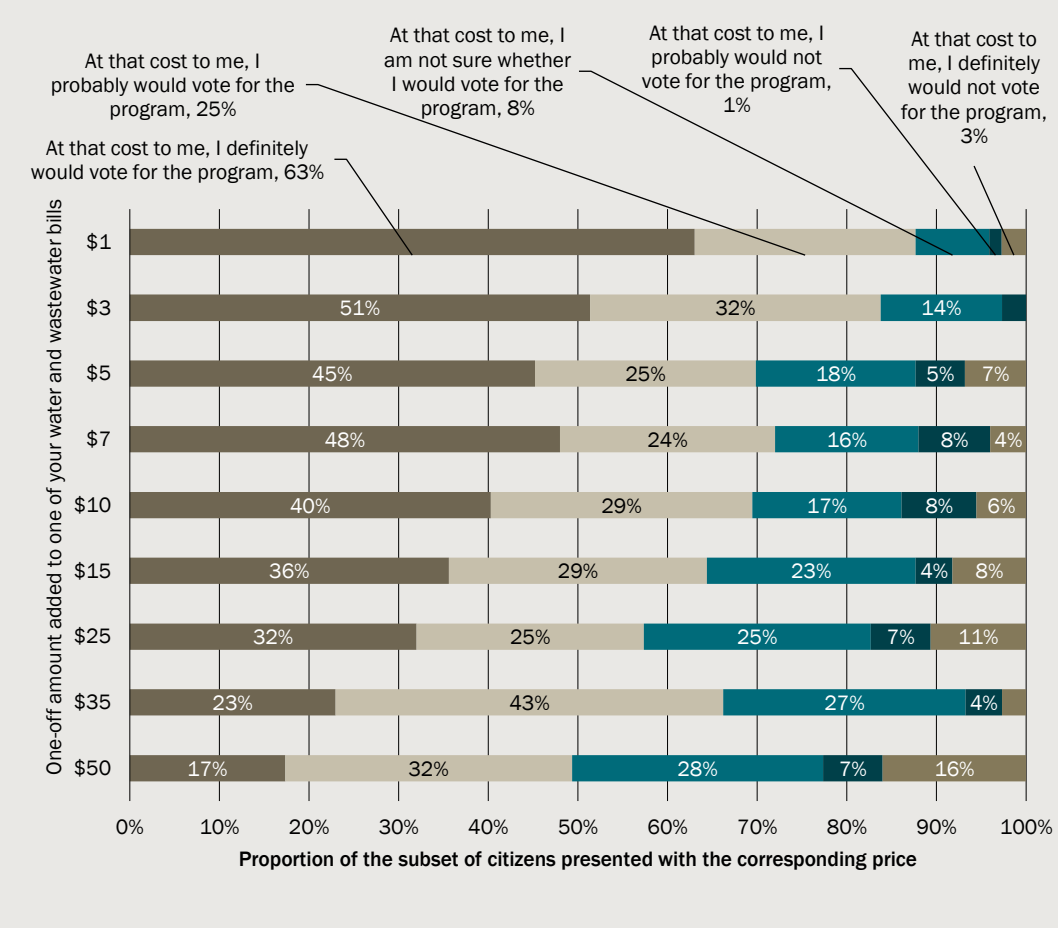
	Wave 1		Wave 2				
	Yes	No	At that cost to me, I definitely would vote for the program	At that cost to me, I probably would vote for the program	At that cost to me, I am not sure whether I would vote for the program	At that cost to me, I probably would not vote for the program	At that cost to me, I definitely would not vote for the program
	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.
$1	16	0	46	18	6	1	2
$3	13	3	38	24	10	2	0
$5	10	6	33	18	13	4	5
$7	12	3	36	18	12	6	3
$10	12	5	29	21	12	6	4
$15	12	5	26	21	17	3	6
$25	11	4	24	19	19	5	8
$35	13	3	17	32	20	3	2
$50	10	5	13	24	21	5	12

Note: n=807

Source: CIE

A majority of citizens indicated definite support for a project to limit the release of raw wastewater at Sydney cliff faces at a one-off cost to them of up to $3. The median response to price levels between $5 and $35 was 'At that cost to me, I probably would vote for the program.'

8.2 Citizen responses to ocean outfalls contingent valuation question



Note: n=664 (Wave 2)

Data source: CIE

Parametric approaches are not used to estimate WTP in this study, since the results are highly sensitive to specification and also infer negative WTP for many respondents. However, in the course of estimating probit models we identified several respondent characteristics that are related to WTP. We found citizens were more likely to vote 'yes' if their household income is greater than $156 000 per year or if located in Inner West, Outer South West, Outer West and Blue Mountains or Parramatta. Citizens were less likely to vote yes if male or with household income below $78 000 per year.

Businesses

Businesses' demand for the project remained strong up to a cost of 15 per cent of a quarterly bill. This was the maximum cost level used in the Wave 1 and Wave 2 fieldwork. The flatness of this demand curve would have caused problems estimating WTP due to the fat tail of the empirical distribution. So, in a third wave of fieldwork, additional responses were collected at two higher cost levels – 25 per cent and 40 per cent of a quarterly bill. Definite support for the project was noticeably lower at these higher cost levels (see table 8.3 and figure 8.4). We also examined business demand using dollar

amounts, rather than proportions of the bill, but there was no clear evidence of a stronger relationship.

8.3 Business responses to ocean outfalls contingent valuation question

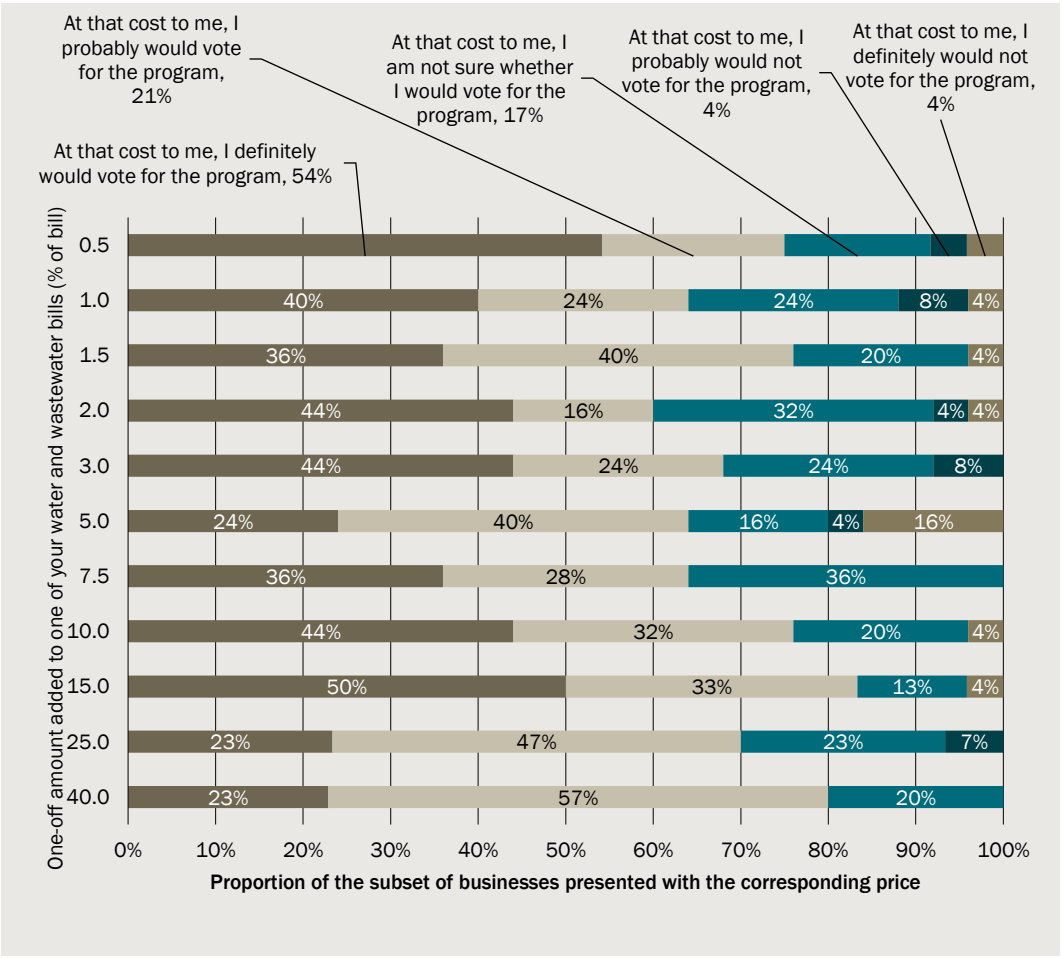
	Wave 1		Wave 2/3				
	Yes	No	At that cost to me, I definitely would vote for the program	At that cost to me, I probably would vote for the program	At that cost to me, I am not sure whether I would vote for the program	At that cost to me, I probably would not vote for the program	At that cost to me, I definitely would not vote for the program
	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.
0.5%	7	2	13	5	4	1	1
1.0%	7	2	10	6	6	2	1
1.5%	7	2	9	10	5	0	1
2.0%	8	1	11	4	8	1	1
3.0%	7	2	11	6	6	2	0
5.0%	9	0	6	10	4	1	4
7.5%	9	0	9	7	9	0	0
10.0%	7	2	11	8	5	0	1
15.0%	7	3	12	8	3	0	1
25.0%	0	0	7	14	7	2	0
40.0%	0	0	8	20	7	0	0

Note: n=370

Source: CIE

A majority of businesses indicated definite support for a project to limit the release of raw wastewater at Sydney cliff faces at a one-off cost to them of 0.5 per cent of one quarterly bill. The median response to all other price levels was 'At that cost to me, I probably would vote for the program.'

8.4 Business responses to ocean outfalls contingent valuation question



Note: n=288 (Wave 2/3)

Data source: CIE

Probit models estimated on the data indicated that businesses were more likely to vote 'yes' if they have 20 or more employees, if they own their business premises, if all/most of their business activity takes place at their business premises, or if they are located in Illawarra, City and Inner South, North Sydney and Hornsby, Northern Beaches or Parramatta. Businesses were less likely to vote 'yes' if they are a sole trader.

Estimates of average willingness to pay

Households

The lower-bound robust non-parametric Turnbull estimator for mean WTP is $18.32 per household. This was calculated by treating each 'At that cost to me, I probably would vote for the program' response as a 'no' vote. This is a conservative approach adopted to counter concerns that CV studies tend to overestimate WTP due to hypothetical bias and yea-saying. A less conservative estimate in which the 'probably yes' response is treated as 'yes' vote at the next lowest price level in the price vector (e.g. probably yes at a cost of

$15 is treated as definitely yes at a cost of $10) results in a lower-bound estimate of mean WTP of $22.58 per household per quarter.

Businesses

The lower-bound robust non-parametric Turnbull estimators for mean WTP are:

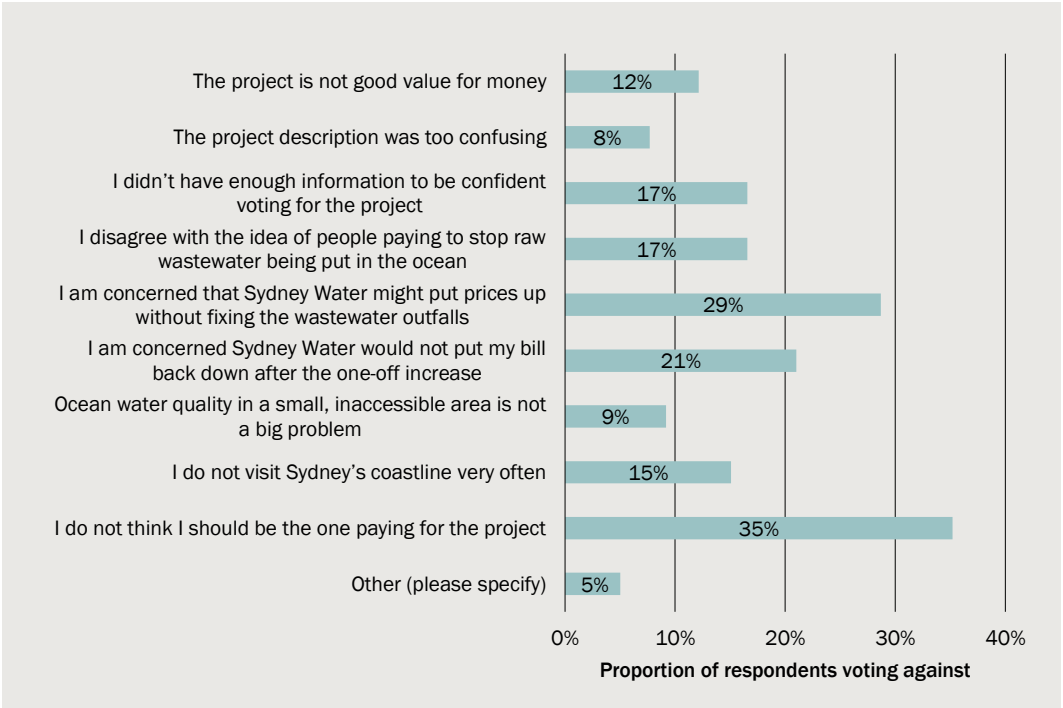
- a one-off payment of 9.6 per cent of a quarterly bill, if each 'At that cost to me, I probably would vote for the program' response is treated as a 'no' vote. This equates to around $29 at the median quarterly bill reported by businesses in this survey of $300.
- a one-off payment of 21.5 per cent of a quarterly bill, if each 'At that cost to me, I probably would vote for the program' response is treated as a 'yes' vote at the next lowest price level in the price vector than the level offered in the question. This equates to around $65 at the median bill level reported in the survey.

Sensitivity analysis should be used when applying these estimates. They have been based on the pooling of several cost categories due to flat parts of the demand curve.

Debriefing questions

The most common reason given for voting against the project was 'I do not think I should be the one paying for the project', followed by 'I am concerned that Sydney Water might put prices up without fixing the wastewater outfalls.'

8.5 Reasons for voting against the ocean outfalls project



Note: n=338 (respondents voting no)

Data source: CIE

Most respondents indicated the survey was consequential, with 32 per cent indicating they believe it is very likely and a further 51 per cent indicating they believe it is somewhat likely that the survey will affect Sydney Water's decisions.

9 Results – water pressure

Responses to valuation questions

Households

Citizens responding on behalf of their households clearly gave consideration to the cost at which the water pressure program was offered, with acceptance levels generally decreasing with cost (see table 9.1 and figure 9.2).

9.1 Citizen responses to water pressure contingent valuation question

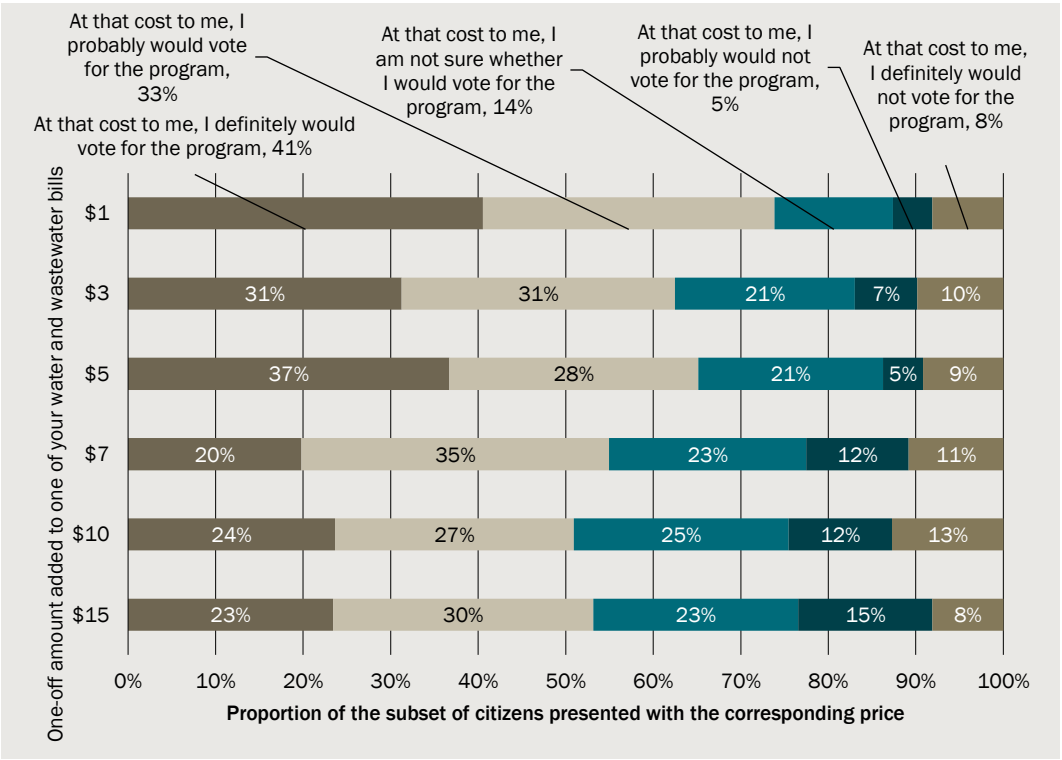
	Wave 1		Wave 2				
	Yes	No	At that cost to me, I definitely would vote for the program	At that cost to me, I probably would vote for the program	At that cost to me, I am not sure whether I would vote for the program	At that cost to me, I probably would not vote for the program	At that cost to me, I definitely would not vote for the program
	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.
$1	21	3	45	37	15	5	9
$3	15	8	35	35	23	8	11
$5	17	8	40	31	23	5	10
$7	15	8	22	39	25	13	12
$10	13	11	26	30	27	13	14
$15	11	13	26	33	26	17	9

Note: n=807

Source: CIE

At all price levels shown in the survey, the median response was 'At that cost to me, I probably would vote for the program.' The proportion of citizens indicating definite support for a program drops from 30-40 per cent when the cost is $1 to $5 down to 20-25 per cent when the cost is $7 to $15.

9.2 Citizen responses to water pressure contingent valuation question



Note: n=664 (Wave 2)

Data source: CIE

Parametric approaches are not used to estimate WTP in this study, since the results are highly sensitive to specification and also infer negative WTP for many respondents. However, in the course of estimating probit models we identified several respondent characteristics that are related to WTP. We found citizens were more likely to vote 'yes' if their household income is greater than $156 000 per year or if located in Illawarra, Eastern Suburbs, Outer West and Blue Mountains, or Parramatta. Citizens were less likely to vote 'yes' if aged 70 years or over.

Businesses

Definite support for a water pressure program declined from around half to around a third of business respondents over the price levels used in the CV exercise, the largest of which was 5 per cent of a quarterly bill (see table 9.3 and figure 9.4).

9.3 Business responses to water pressure contingent valuation question

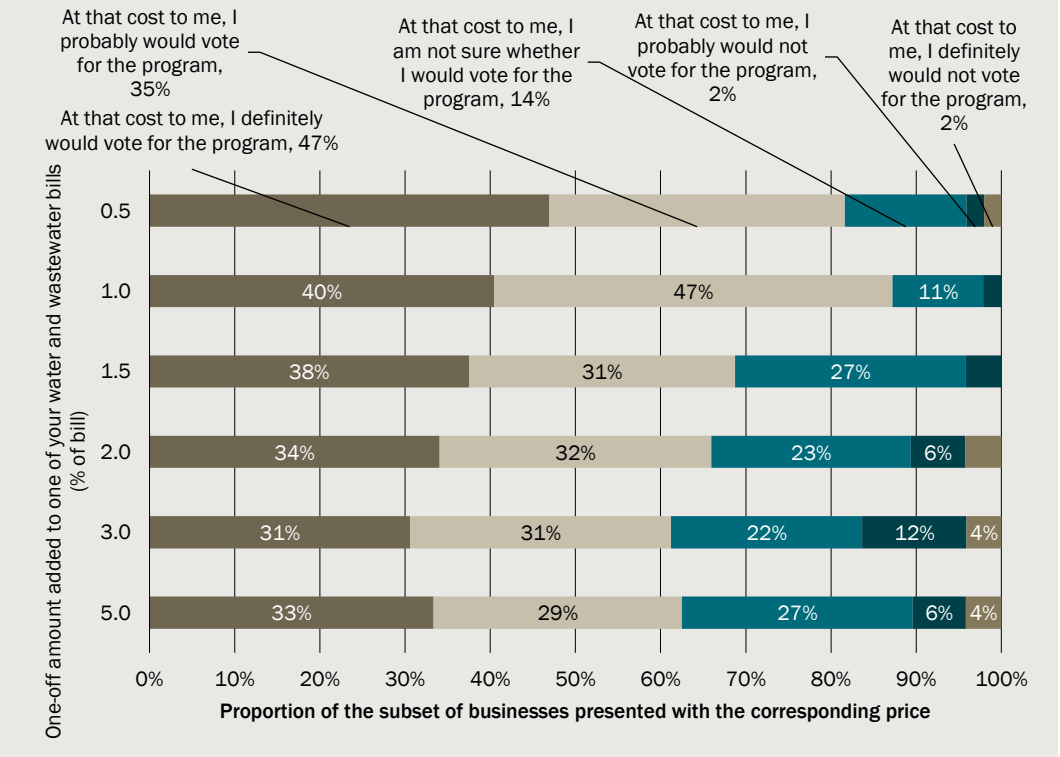
	Wave 1		Wave 2				
	Yes	No	At that cost to me, I definitely would vote for the program	At that cost to me, I probably would vote for the program	At that cost to me, I am not sure whether I would vote for the program	At that cost to me, I probably would not vote for the program	At that cost to me, I definitely would not vote for the program
	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.	No. of resp.
0.5%	12	1	23	17	7	1	1
1.0%	10	4	19	22	5	1	0
1.5%	9	5	18	15	13	2	0
2.0%	9	5	16	15	11	3	2
3.0%	8	5	15	15	11	6	2
5.0%	10	4	16	14	13	3	2

Note: n=370

Source: CIE

Almost half of surveyed businesses would definitely support a water-pressure-improvement program at a one-off cost of 0.5 per cent of a quarterly bill. The median response for all price levels used in the survey (up to 5 per cent of a quarterly bill) was 'At that cost to me, I probably would vote for the program.'

9.4 Business responses to water pressure contingent valuation question



Note: n=288 (Wave 2/3)

Data source: CIE

Probit models estimated on the data indicated that businesses were more likely to vote 'yes' if they have 20 or more employees, if they indicated they would be able to operate their business during a water pressure failure, if they own their business premises, if all/most of their business activity takes place at their business premises, or if they are located in Illawarra.

Estimates of average willingness to pay

Households

The lower-bound robust non-parametric Turnbull estimator for mean WTP is $4.61 per household. This was calculated by treating each 'At that cost to me, I probably would vote for the program' response as a 'no' vote. This is a very conservative approach adopted to counter concerns that CV studies tend to overestimate WTP due to hypothetical bias and yea-saying. A less conservative estimate in which the 'probably yes' response is treated as yes vote at the next lowest price level in the price vector (e.g. probably yes at a cost of $15 is treated as definitely yes at a cost of $10) results in a lower-bound estimate of mean WTP of $7.23 per household.

Businesses

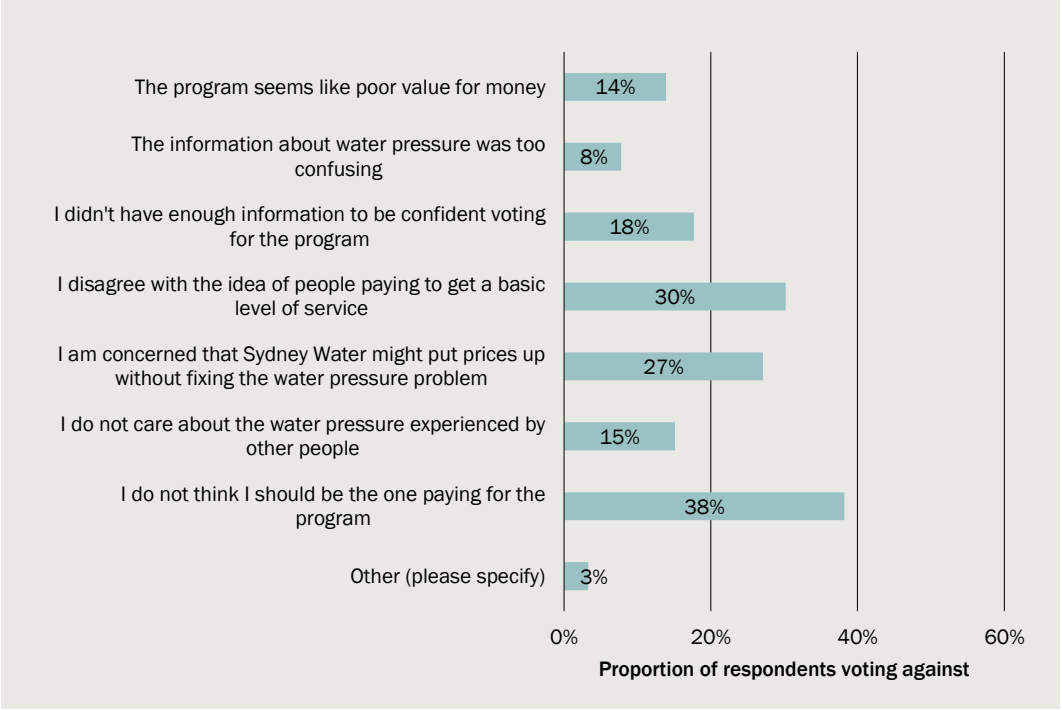
The lower-bound robust non-parametric Turnbull estimators for mean WTP are:

- a one-off payment of 1.34 per cent of a quarterly bill, if each 'At that cost to me, I probably would vote for the program' response is treated as a 'no' vote. This equates to around $4 at the median quarterly bill reported by businesses in this survey of $300.
- a one-off payment of 3.05 per cent of a quarterly bill, if each 'At that cost to me, I probably would vote for the program' response is treated as a 'yes' vote at the next lowest price level in the price vector than the level offered in the question. This equates to around $9 at the median bill level reported in the survey.

Debriefing questions

The most common reason given for voting against the project was 'I do not think I should be the one paying for the program', followed by 'I disagree with the idea of people paying to get a basic level of service' and 'I am concerned that Sydney Water might put prices up without fixing the water pressure problem.'

9.5 Reasons for voting against the water pressure project



Note: n=424 (respondents voting no)

Data source: CIE

Most respondents indicated the survey was consequential, with 32 per cent indicating they believe it is very likely and a further 51 per cent indicating they believe it is somewhat likely that the survey will affect Sydney Water's decisions.

10 Discussion

Applying the results

It is difficult to draw many meaningful conclusions from the results of this research when viewed in isolation, since their primary purpose is as inputs to cost-benefit analysis. When conducting cost-benefit analysis, the estimates should ideally be used to value only changes in service that are within the range presented to respondents in this study (presented in tables 3.2 and 3.3 of this report). Research has shown individuals are risk averse to losses of low probability and that the value placed on changes in risk is non-linear (Tversky and Kahnemann 1992). A linear extrapolation of these results to changes in risk that are outside the range used in the study may overestimate WTP.

Comparison with existing evidence

The results for WTP and WTA compensation for changes in the likelihood of water interruptions and wastewater overflows were of a similar order of magnitude to the estimates found for Icon Water by McNair and Scarpa (2016).

McNair and Scarpa (2016) found households' WTP for a one percentage point decrease in the likelihood of water supply interruptions was $1.85 per year. This lies between the equivalent estimates in the present study for short ($0.56 per year) and long ($2.40 per year) interruptions. The earlier Hensher et al (2005) study in Canberra found household WTP of $11 per year to avoid a water interruption that occurs once every ten years, which converts to $1.10 per year to avoid a one percentage point change in interruption likelihood. This also lies between the estimates for short and long interruptions in the present study, with or without indexation for general price inflation.

McNair and Scarpa (2016) found household WTA for a one percentage point increase in the likelihood of water interruptions to be -$3.49 per year. Again, this lies between the equivalent estimates in the present study for short (-$1.19 per year) and long (-$5.09 per year) interruptions.

In relation to wastewater overflows, Canberra households were willing to pay $16 per year for a one percentage point decrease in likelihood. In the present study, the equivalent estimate would be $8.98 per year, though it should be noted this comparison involves some extrapolation outside the range of levels used in the experimental design, since the maximum decrease in likelihood offered to respondents in the present study was 0.4 of a percentage point. Similarly, the Icon Water WTA figure for a one percentage point increase in likelihood of -$86 per year compares with -$82 per year in the present study, noting that the largest increase shown to respondents was 0.7 of a percentage point. The Hensher et al (2005) study found lower values, since by interpolation we

calculate they estimated WTP of $2.10 per year for a one percentage point change in likelihood of overflows. It should be noted however that the Hensher et al (2005) study did not describe service levels in terms of likelihood but rather the frequency of overflows happening with certainty.

There was a significant difference between the studies' estimates of WTP and WTA compensation for changes in the time taken to stop and clean up after overflows, with estimates in the present study roughly a tenth of those in the Icon Water study. This could be due in part to the higher base likelihood of overflows in Canberra.

Overall, this comparison indicates that the findings of the present study are not outliers in the existing body of evidence and provide confidence in the method, particularly as the results were robust to differences in methods across the two studies relating to the expression of likelihoods and the levels of status quo service.

Difference between willingness to pay and willingness to accept

Similar to the McNair and Scarpa (2016) study discussed above, a notable feature of the present study, particularly the wastewater component, is the significant difference between estimates of WTA compensation for degradation in service and estimates of WTP for an equivalent improvement in service. This difference should not be considered a weakness in the survey technique. It is a recognised phenomenon in consumer psychology (Kahnemann and Tversky 1991) and past research in economics has found that differences between WTP and WTA can be explained by:

- WTA being unconstrained by income; and
- substitutes being very costly, which they are in the case of water and wastewater network services (Hanemann 1991).

We also note it is consistent with qualitative evidence derived from other customer engagement in the water sector. For example, Yarra Valley Water found 'Our research shows that most customers are not willing to see any increase in bills to further improve levels of service …At the same time, they've said that they value increased service levels over a bill decrease.' (Yarra Valley Water 2017, pp. 9,12)

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A Expert peer review

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26th, September, 2018

Peer Review of Willingness to Pay Research Project

To whom it may concern,

I write to communicate my involvement as an expert of the Institute of Business Research of the Waikato Management School in the peer review of the study undertaken by the Centre for International Economics in relation to households' and businesses' willingness to pay (WTP) for changes in the water and wastewater services provided to the population of Sydney Water's customers. I engaged in consultation and dialogue with Dr. Benjamin McNair from the beginning of this endeavour and at several stages of advancement in the conduction of this study. In particular, I reviewed the technical details of all of the experimental designs for the stated choice surveys and the bid design for the contingent valuation surveys. I found the resulting designs employed in each survey to be well grounded in the theory and current practice of experimental design for stated choice data collection.

I was also involved in evaluating the various model estimation procedures. In that context I was able to independently replicate the initial models from which, after an adequate specification search, the more final selected models used to obtain WTP estimates described in the report were obtained. I reviewed the congruence of the interpretation of the statistical model results for policy recommendation and found it robust and coherent with my understanding of these models.

With the information in my possession I am satisfied that the report fully meets the state of practice in commercial consultancy environments in non market valuation studies via stated choice data of regulated public utility customers. In fact, the techniques used in this study go beyond commonly established practice and include approaches at the forefront of the discipline, which many, including myself, would consider state of the art. One such example is the important identification of gain-loss asymmetry. Overall I am very satisfied with the quality of the report and the supporting data analysis and specification search, which in my opinion made an excellent use of the resources made available for the study.

Sincerely yours,

Riccardo Scarpa

B Questionnaire – water interruptions

Project	Sydney Water CIPA
Engagement	Water interruptions
Sample	Citizens n=800 and businesses n=300

Welcome…

Thank you for participating in this survey, which is being run by Pureprofile and the Centre for International Economics on behalf of Sydney Water.

As part of Sydney Water's focus on putting customers at the heart of everything we do, we are asking our customers to provide their views on water interruptions. Your input is very important and will affect the way we work on our water pipes.

This questionnaire will take around 15-20 minutes to complete.

We wish to reassure you that this is genuine market research and as always your individual survey responses will remain confidential and anonymous at all times.

In the unlikely event of any technical difficulties please click on the technical support e-mail link.

For other enquiries, please contact Sydney Water on 1800 627 687.

Please Keep In Mind…

Do not use your Back or Forward browser buttons while you are taking this survey. Once you answer a question, you will not be able to go back and change your answer.

Before we go through to the main study we would like to ask you a number of questions to make sure we are interviewing a good cross section of people.

1. Are you:

   Please select one.

   a. A business owner or sole trader with a commercial premises **GO TO BUSINESS VERSION**

   b. Responsible for managing business operations at a commercial premises **GO TO BUSINESS VERSION**

   c. None of the above **GO TO CITIZEN VERSION**

CITIZEN ONLY

Please fill out this questionnaire on behalf of your household.

BUSINESS ONLY

Please fill out this questionnaire on behalf of your business.

CITIZEN ONLY

2. Do you or anyone in your household work for any of the following industries/organisations?

Water supply or wastewater services

Market research

IPART (Independent Pricing and Regulatory Tribunal)

NSW Health in a role related to water quality regulation

NSW Environment Protection Authority

a. Yes **TERMINATE**

b. No

BUSINESS ONLY

3. Does your business operate in the water and wastewater service or market research industries?

a. Yes **TERMINATE**

b. No

TERMINATE PAGE

Thank you for your patience in answering these questions. Unfortunately, we do not need you to participate in our research this time, but we sincerely appreciate your time and assistance today.

To keep up to date with opportunities to be involved in ongoing research and consultation, visit https://www.sydneywatertalk.com.au/

CITIZEN ONLY

4. How does your household get water and wastewater bills?

   a. I get bills from Sydney Water

   b. I get bills from Sydney Water and from my body corporate

   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

   f. I don't pay a separate amount for water and wastewater **TERMINATE**

BUSINESS ONLY

5. How does your business get water and wastewater bills?

   a. I get bills from Sydney Water

   b. I get bills from Sydney Water and from my body corporate

   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

   f. I don't pay a separate amount for water and wastewater **TERMINATE**

CITIZEN ONLY

Please give a rough estimate of the amount you pay for water and wastewater services each quarter.

If you receive bills from Sydney Water:

- a small household, with no garden, using 25 kL each quarter, would pay $224
- a typical household, using 50 kL each quarter, would pay $276
- a large household or a household with a garden, using 75 kL each quarter, would pay $328

6. The amount I pay for water and wastewater services each quarter is about:

_____

BUSINESS ONLY

Please give a rough estimate of the amount your business pays for water and wastewater services each quarter.

If you receive bills from Sydney Water:

- a small business, using a similar amount to a residential property (50 kL each quarter), would pay around $280 per quarter
- a business with slightly larger (25mm) pipes connecting to our network, using three times more water than a typical residential property, would pay around $670 per quarter
- businesses with larger pipes and higher water usage would pay higher amounts.

7. The amount my business pays for water and wastewater services each quarter is about:

_____

CITIZEN ONLY

8. What is the postcode of your home address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

_____

BUSINESS ONLY

9. What is the postcode of your business address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

_____

CITIZEN ONLY

10. Are you… **CHECK QUOTAS**

    a. Male
    b. Female
    c. Non-gender-specific
    d. Prefer not to say

CITIZEN ONLY

11. What is your age? **CHECK QUOTAS**

    a. Less than 18 years **TERMINATE**
    b. 18-29 years
    c. 30-39 years
    d. 40-49 years
    e. 50-59 years
    f. 60-69 years
    g. 70-79 years
    h. 80 years or more

BUSINESS ONLY

12. How many employees do you have in your business (full time equivalents other than the proprietor)? **CHECK QUOTAS**

    a. Non-employing / sole trader
    b. 1-4 employees
    c. 5-19 employees
    d. 20-199 employees
    e. 200 employees or more **TERMINATE**

BUSINESS ONLY

13. In which industry does your business mainly operate? **CHECK QUOTAS**

    a. Accommodation and Food Services
    b. Administrative and Support Services
    c. Agriculture, Forestry and Fishing
    d. Arts and Recreation Services
    e. Construction
    f. Currently Unknown
    g. Education and Training
    h. Electricity, Gas, Water and Waste Services
    i. Financial and Insurance Services

j. Health Care and Social Assistance
k. Information Media and Telecommunications
l. Manufacturing
m. Mining
n. Other Services
o. Professional, Scientific and Technical Services
p. Public Administration and Safety
q. Rental, Hiring and Real Estate Services
r. Retail Trade
s. Transport, Postal and Warehousing
t. Wholesale Trade

This questionnaire is about water supply interruptions.

It has three parts:

- Background information on the types of water supply interruptions that can occur and how they might affect you
- Questions about how you think Sydney Water should balance its spending with the risk of water supply interruptions
- Questions about you

Sometimes, Sydney Water will need to turn off your mains water supply to fix water pipes in your area.

CITIZEN ONLY

While the water supply is turned off, you won't be able to get water from the taps on your property. For example, you will not be able to:

- pour a glass of drinking water;
- flush the toilet (after it's been flushed once);
- rinse or wash dishes or clothes; or
- have a shower.

BUSINESS ONLY

While the water supply is turned off, you won't be able to get water from the taps on your property. This will affect businesses in different ways. For example, it may mean that your staff and customers will be unable to pour a glass of drinking water or flush toilets for the duration of the interruption.

Please take a moment to consider how a water supply interruption might affect the operation of your business.

Sometimes, Sydney Water will give you warning about a water interruption by sending you a letter beforehand.

On other occasions, the work will be urgent and Sydney Water will not be able to warn you about an interruption.

Interruptions with warning typically happen after 9am in residential areas and after 11pm in business areas. Interruptions that occur without warning could happen at any time of day or night.

During a water interruption, there could be noise from trucks and workers on your street.

Traffic could be blocked or slowed to allow these trucks and workers to fix the broken water pipes. Your travel time could be affected even when interruptions happen in areas away from your property.

Sydney Water reduces the risk of unexpected interruptions by doing things like:

- installing pressure-reducing valves in the water pipes
- replacing ageing pipes.

These activities come at a cost that needs to be recovered in Sydney Water bills paid by you and other customers. We want to know your views on how we should balance this cost with the risk of water supply interruptions.

You will now be asked about hypothetical service scenarios.

An example of the type of question you will be asked is set out below. In each question, three water service packages will be described by the chances of different types of water interruptions happening and the impact on the amount you pay for water.

You will be asked to choose your preferred package by ticking one box in the bottom row.

			Current Package	Package A	Package B
Supply interruptions without warning					
Short unplanned interruptions	Chance each year of an interruption lasting 1-3 hours		120 properties in 1000	180 properties in 1000	60 properties in 1000
Long unplanned interruptions	Chance each year of an interruption lasting 6-8 hours		16 properties in 1000	24 properties in 1000	8 properties in 1000
Repeat unplanned interruptions	Chance of experiencing three interruptions in a year		3 properties in 1000	10 properties in 1000	1 properties in 1000
Supply interruptions with written notice					
Planned interruptions	Chance each year of a planned interruption lasting 4-6 hours		20 properties in 1000	30 properties in 1000	10 properties in 1000
The cost to you					
Cost	The permanent change in the amount you pay for water each year	$	No change	You save $X	You pay an extra $Y
Your choice					
If these were the only three options available to you, which option would you choose?			○	○	○

The chance of interruptions happening is expressed as the number of properties in every 1000 experiencing an interruption each year. On average, there are roughly 3000 properties in a suburb. So, 1000 properties is around one third of a suburb.

Under the 'current package' in this example, short unplanned interruptions would happen to 120 properties in 1000 each year. This means a 12 per cent chance there would be an interruption for your property.

Some of the packages may look strange. That is because there are a range of repair and replacement activities Sydney Water could undertake to deliver different outcomes.

			Current Package	Package A	Package B
Supply interruptions without warning					
Short unplanned interruptions	Chance each year of an interruption lasting 1-3 hours		120 properties in 1000	180 properties in 1000	60 properties in 1000
Long unplanned interruptions	Chance each year of an interruption lasting 6-8 hours		16 properties in 1000	24 properties in 1000	8 properties in 1000
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Supply interruptions with written notice					
Planned interruptions	Chance each year of a planned interruption lasting 4-6 hours		20 properties in 1000	30 properties in 1000	10 properties in 1000
The cost to you					
Cost	The permanent change in the amount you pay for water each year		No change	You save $X	You pay an extra $Y
Your choice					
If these were the only three options available to you, which option would you choose?			○	○	○

Answering questions about hypothetical situations

Research has shown that people tend to respond differently to hypothetical situations than they would in real life situations. This is most likely because they don't actually have to follow through with their choices in hypothetical situations. Although the situations presented in this survey are hypothetical, your responses will influence decisions about the management of the water system in Sydney, the Blue Mountains and the Illawarra, which will affect the number of water supply interruptions that happen and also the amount you pay for water. Therefore, please answer the questions as if you were really facing these decisions.

14. <choice question 1>

15. <choice question 2> RANDOMISE QUESTION ORDER AND LABEL CHOICE QUESTION 2 WITH PACKAGE C AND PACKAGE D, ETC.

16. <choice question 3>

17. <choice question 4>

18. <choice question 5>

19. <choice question 6>

Now a few questions about how you answered the choice questions.

20. Did you find the choice questions difficult to answer in the time you had available?
    a. They were very difficult questions
    b. They were somewhat difficult questions
    c. They were not difficult questions

21. Was the "current package" shown in each choice question similar to the level of service you currently get?
    a. Yes **SKIP TO Q23**
    b. No
    c. Don't know **SKIP TO Q23**

22. How did you go about answering the questions given you found the "current package" to be different to your experience?
    a. I assumed that by selecting "current package" I would be getting the service levels described in the question
    b. I assumed that by selecting "current package" I would be getting the service levels I have experienced in the past

23. Did you believe that Sydney Water would be able to deliver any of the packages presented?
    a. Yes **SKIP TO Q25**
    b. No
    c. Don't know **SKIP TO Q25**

24. When you saw packages that you did not believe Sydney Water could deliver, how did you go about answering the question(s)?

    a. I answered the question(s) as though I would be getting the service levels and bill impacts described in the packages

    b. I answered the question(s) as though I would be getting different service levels or bill impacts to those described in the packages

IF SELECTED AN OPTION OTHER THAN 'CURRENT PACKAGE' IN AT LEAST ONE CHOICE QUESTION, SKIP Q25 AND GO TO Q26 (IN OTHER WORDS, Q25 IS ONLY FOR RESPONDENTS WHO CHOSE 'CURRENT PACKAGE' IN ALL SIX CHOICE QUESTIONS)

25. Why did you select the current package in every choice question? (tick as many as apply)

    a. I didn't have enough time to properly consider the options

    b. I didn't have enough information to be confident choosing the other options

    c. I disagree with the idea of people paying to avoid water supply interruptions

    d. I disagree with the idea of offering people money to face more water supply interruptions

    e. I'm concerned that Sydney Water might put prices up without making the service improvements

    f. I'm concerned that Sydney Water might let service get worse without reducing prices

    g. Other _____

26. Earlier in the survey we told you that your responses will affect the number of water supply interruptions that happen and also the amount you pay for water. To what degree do you expect the results of this survey will affect decisions made by Sydney Water?

    a. I believe it is very likely the survey will affect Sydney Water's decisions

    b. I believe it is somewhat likely the survey will affect Sydney Water's decisions

    c. I don't think the survey will affect any of Sydney Water's decisions

CITIZEN ONLY

27. How many water supply interruptions can you recall experiencing at home?

_____ interruptions in

_____ years.

BUSINESS ONLY

28. How many water supply interruptions can you recall experiencing at your business?

_____ interruptions in

_____ years.

CITIZEN ONLY

29. How many water supply interruptions can you recall experiencing away from home (e.g. at work)?

_____ interruptions in

_____ years.

BUSINESS ONLY

30. How many water supply interruptions can you recall experiencing away from your business (e.g. at home)?

_____ interruptions in

_____ years.

SKIP Q31 IF:

CITIZEN ANSWERS TO BOTH Q27 AND Q29 WERE ZERO

BUSINESS ANSWERS TO BOTH Q28 AND Q30 WERE ZERO

31. When was the most recent water interruption you experienced?

    a. In the past 6 months

    b. 6-12 months ago

    c. 1-2 years ago

    d. 3-5 years ago

e. More than 5 years ago

32. Approximately how many different water interruptions have you come to know about talking to your friends, relatives, colleagues or neighbours?

_____

33. How many times have you been caught in traffic that was clearly caused by a burst water main or work being done on water pipes?

a. Several times

b. Once or twice

c. Never, as far as I know

CITIZEN ONLY

34. How often do you have someone at home during business hours on weekdays?

a. Never / very rarely

b. Some of the time

c. Very often / all of the time

d. Prefer not to say

35. Is the place you live in:

a. Owned outright or with a mortgage

b. Being rented or occupied rent-free

c. Other (please specify) _____

36. Do you speak a language other than English at home?

a. No, English only **SKIP TO Q38**

b. Yes

37. What is the main language spoken at home?

a. Arabic

b. Australian Indigenous Languages

c. Cantonese

d. Croatian

e. Dutch

f. French

g. German
h. Greek
i. Hindi
j. Indonesian
k. Italian
l. Japanese
m. Korean
n. Lebanese
o. Macedonian
p. Mandarin
q. Polish
r. Punjabi
s. Serbian
t. Spanish
u. Tagalog
v. Turkish
w. Vietnamese
x. Other (please specify) _____
y. Prefer not to say

38. Are you of Aboriginal or Torres Strait Islander origin?

a. Yes
b. No
c. Prefer not to say

39. Which best describes your household:

a. Couple/family without children at home
b. Couple/family with children at home
c. One parent family
d. Group household
e. Single person household
f. Other

40. What is your work status?

a. Working full time
b. Working part time/casually
c. Student
d. Not currently employed
e. Home duties
f. Retired
g. Other

41. What is your approximate annual household income before tax?

a. Less than $41,600
b. Between $41,600 and $78,000
c. Between $78,000 and $104,000
d. Between $104,000 and $156,000
e. More than $156,000
f. Do not wish to answer

42. In what type of dwelling do you live?

a. Separate house
b. Semi-detached, row or terrace house, townhouse
c. Flat or apartment
d. Other

BUSINESS ONLY

43. Can you continue to operate your business without water supply from Sydney Water?

a. Yes
b. No, my business would need to stop operation without water supply
c. My business would need to stop operation if the water supply was off for a period of more than (please specify) _____

44. Do you have clients/customers at your business premises?

a. Never / very rarely
b. Some of the time
c. Very often / all of the time

d. Prefer not to say

45. How much of your business activity takes place at your business premises?

a. All/most of our business activity
b. Some of our business activity
c. Little/none of our business activity

46. How often does your business operate after 11pm?

a. Never / very rarely
b. Some of the time
c. Very often / all of the time
d. Prefer not to say

47. Is your place of business:

a. Owned outright or with a mortgage
b. Being rented or occupied rent-free
c. Other (please specify) _____

48. For how many years has your business been operating?

a. Less than 1 year
b. 1-2 years
c. 2-5 years
d. 6-10 years
e. More than 10 years

49. Are you…

a. Male
b. Female
c. Non-gender-specific
d. Prefer not to say

50. What is your age?

a. Less than 18 years
b. 18-29 years
c. 30-39 years
d. 40-49 years
e. 50-59 years

f. 60-69 years

g. 70-79 years

h. 80 years or more

51. What is your position or title within your business?

a. Owner / proprietor

b. Senior management

c. Other employee

52. Finally, is there any feedback you would like to provide on this survey?

_____
_____
_____
_____

Thank you for participating in this survey. Your opinions are very important.

C Questionnaire – wastewater overflows

Project	Sydney Water CIPA
Engagement	Wastewater overflows
Sample	Citizens n=800 and businesses n=300

Welcome…

Thank you for participating in this survey, which is being run by Pureprofile and the Centre for International Economics on behalf of Sydney Water.

As part of Sydney Water's focus on putting customers at the heart of everything we do, we are asking our customers to provide their views on wastewater overflows. Your input is very important and will affect the way we work on our wastewater pipes.

This questionnaire will take around 15-20 minutes to complete.

We wish to reassure you that this is genuine market research and as always your individual survey responses will remain confidential and anonymous at all times.

In the unlikely event of any technical difficulties please click on the technical support e-mail link.

For other enquiries, please contact Sydney Water on 1800 627 687.

Please Keep In Mind…

Do not use your Back or Forward browser buttons while you are taking this survey. Once you answer a question, you will not be able to go back and change your answer.

Before we go through to the main study we would like to ask you a number of questions to make sure we are interviewing a good cross section of people.

1. Are you:

   Please select one.

   a. A business owner or sole trader with a commercial premises **GO TO BUSINESS VERSION**

   b. Responsible for managing business operations at a commercial premises **GO TO BUSINESS VERSION**

   c. None of the above **GO TO CITIZEN VERSION**

CITIZEN ONLY

Please fill out this questionnaire on behalf of your household.

BUSINESS ONLY

Please fill out this questionnaire on behalf of your business.

CITIZEN ONLY

2. Do you or anyone in your household work for any of the following industries/organisations?

Water supply or wastewater services

Market research

IPART (Independent Pricing and Regulatory Tribunal)

NSW Health in a role related to water quality regulation

NSW Environment Protection Authority

a. Yes **TERMINATE**

b. No

BUSINESS ONLY

3. Does your business operate in the water and wastewater service or market research industries?

a. Yes **TERMINATE**

b. No

TERMINATE PAGE

Thank you for your patience in answering these questions. Unfortunately, we do not need you to participate in our research this time, but we sincerely appreciate your time and assistance today.

To keep up to date with opportunities to be involved in ongoing research and consultation, visit https://www.sydneywatertalk.com.au/

CITIZEN ONLY

4. How does your household get water and wastewater bills?

   a. I get bills from Sydney Water

   b. I get bills from Sydney Water and from my body corporate

   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

   f. I don't pay a separate amount for water and wastewater **TERMINATE**

BUSINESS ONLY

5. How does your business get water and wastewater bills?

   a. I get bills from Sydney Water

   b. I get bills from Sydney Water and from my body corporate

   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

   f. I don't pay a separate amount for water and wastewater **TERMINATE**

CITIZEN ONLY

Please give a rough estimate of the amount you pay for water and wastewater services each quarter.

If you receive bills from Sydney Water:

- a small household, with no garden, using 25 kL each quarter, would pay $224
- a typical household, using 50 kL each quarter, would pay $276
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_____

BUSINESS ONLY

Please give a rough estimate of the amount your business pays for water and wastewater services each quarter.

If you receive bills from Sydney Water:

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- a business with slightly larger (25mm) pipes connecting to our network, using three times more water than a typical residential property, would pay around $670 per quarter
- businesses with larger pipes and higher water usage would pay higher amounts.

7. The amount my business pays for water and wastewater services each quarter is about:

_____

CITIZEN ONLY

8. What is the postcode of your home address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

_____

BUSINESS ONLY

9. What is the postcode of your business address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

_____

CITIZEN ONLY

10. Are you… **CHECK QUOTAS**

    a. Male
    b. Female
    c. Non-gender-specific
    d. Prefer not to say

CITIZEN ONLY

11. What is your age? CHECK QUOTAS

a. Less than 18 years TERMINATE
b. 18-29 years
c. 30-39 years
d. 40-49 years
e. 50-59 years
f. 60-69 years
g. 70-79 years
h. 80 years or more

BUSINESS ONLY

12. How many employees do you have in your business (full time equivalents other than the proprietor)? CHECK QUOTAS

a. Non-employing / sole trader
b. 1-4 employees
c. 5-19 employees
d. 20-199 employees
e. 200 employees or more TERMINATE

BUSINESS ONLY

13. In which industry does your business mainly operate? CHECK QUOTAS

a. Accommodation and Food Services
b. Administrative and Support Services
c. Agriculture, Forestry and Fishing
d. Arts and Recreation Services
e. Construction
f. Currently Unknown
g. Education and Training
h. Electricity, Gas, Water and Waste Services
i. Financial and Insurance Services
j. Health Care and Social Assistance

k. Information Media and Telecommunications
l. Manufacturing
m. Mining
n. Other Services
o. Professional, Scientific and Technical Services
p. Public Administration and Safety
q. Rental, Hiring and Real Estate Services
r. Retail Trade
s. Transport, Postal and Warehousing
t. Wholesale Trade

This questionnaire is about wastewater overflows.

It has three parts:

- Background information on the types of wastewater overflows that can occur and how they might affect you
- Questions about how you think Sydney Water should balance its spending with the risk of wastewater overflows
- Questions about you

Wastewater is the used water that goes down sinks, toilets and drains. When the wastewater system becomes blocked, for example due to tree roots, wastewater can overflow from the manholes that are used to access the sewerage pipes or from a grate in your yard.

In rare cases (about 1 in 200), wastewater may overflow within a building, for example from the shower drain.

Wastewater is mostly water, but it can contain viruses, bacteria and other organisms that are harmful to humans, animals and the environment. In the event of an overflow you would need to stop using your toilets, sinks and other drains and keep away from the affected area until the blockage has been cleared and the area has been thoroughly cleaned by Sydney Water staff.

Wastewater overflows can happen at any time of day. It typically takes about five hours before Sydney Water has unblocked the pipe and cleaned the affected area.

There may be some noise from trucks and workers on your street while this is happening.

Traffic could be blocked or slowed to allow these trucks and workers to work on the pipes. Your travel time could be affected even when overflows happen in areas away from your property.

Sydney Water reduces the risk of these overflows by doing things like:

- putting cameras down pipes to monitor their condition;
- replacement of ageing pipes; and
- cleaning pipes.

These activities come at a cost that needs to be recovered in Sydney Water bills paid by you and other customers. We want to know your views on how we should balance this cost with the risk of wastewater overflows.

You will now be asked six questions about hypothetical service scenarios.

An example of the type of question you will be asked is set out below. In each question, three wastewater service packages will be described by the chance of overflows happening, the time taken to clean them up and the impact on the amount you pay for water.

You will be asked to identify your preferred package by ticking one box in the bottom row.

	Current Package	Package A	Package B
Your service level			
Chance of a wastewater overflow on your property each year	50 properties in 10,000	120 properties in 10,000	10 properties in 10,000
Chance of three wastewater overflows on your property each year	1 property in 10,000	Almost never	1 property in 10,000
Time taken to stop overflow and clean affected area	5 hours	7 hours	3 hours
The cost to you			
The permanent change in the amount you pay for wastewater services each year	No change	You save $X	You pay an extra $Y
Your choice			
If these were the only three options available to you, which option would you choose?	○	○	○

The chance of interruptions happening is expressed as the number of properties in every 10,000 experiencing an overflow each year. On average, there are roughly 3000 properties in a suburb. So, 10,000 properties is around three suburbs.

Under the 'current package' in this example, overflows would happen to 50 properties in 10,000 each year. This means a 0.5 per cent chance there would be an overflow on your property.

Some of the packages may look strange. That is because there are a range of cleaning, repair and replacement activities Sydney Water could undertake to deliver different outcomes.

	Current Package	Package A	Package B
Your service level			
Chance of a wastewater overflow on your property each year	50 properties in 10,000	120 properties in 10,000	10 properties in 10,000
Chance of three wastewater overflows on your property each year	1 property in 10,000	Almost never	1 property in 10,000
Time taken to stop overflow and clean affected area	5 hours	7 hours	3 hours
The cost to you			
The permanent change in the amount you pay for wastewater services each year	No change	You save $X	You pay an extra $Y
Your choice			
If these were the only three options available to you, which option would you choose?	○	○	○

Answering questions about hypothetical situations

Research has shown that people tend to respond differently to hypothetical situations than they would in real life situations. This is most likely because they don't actually have to follow through with their choices in hypothetical situations. Although the situations presented in this survey are hypothetical, your responses will influence decisions about the management of the water system in Sydney, Blue Mountains and Illawarra, which will affect the number of wastewater overflows that occur and also the amount you pay for wastewater services. Therefore, please answer the questions as if you were really facing these decisions.

14. <choice question 1>

15. <choice question 2> RANDOMISE QUESTION ORDER AND LABEL CHOICE QUESTION 2 WITH PACKAGE C AND PACKAGE D, ETC.

16. <choice question 3>

17. <choice question 4>

18. <choice question 5>

19. <choice question 6>

Now a few questions about how you answered the choice questions.

20. Did you find the choice questions difficult to answer in the time you had available?

    d. They were very difficult questions

    e. They were somewhat difficult questions

    f. They were not difficult questions

21. Was the "current package" shown in each choice question similar to the level of service you currently get?

    d. Yes **SKIP TO Q23**

    e. No

    f. Don't know **SKIP TO Q23**

22. How did you go about answering the questions given you found the "current package" to be different to your experience?

    c. I assumed that by selecting "current package" I would be getting the service levels described in the question

    d. I assumed that by selecting "current package" I would be getting the service levels I have experienced in the past

23. Did you believe that Sydney Water would be able to deliver any of the packages presented?

    d. Yes **SKIP TO Q25**

    e. No

    f. Don't know **SKIP TO Q25**

24. When you saw packages that you did not believe Sydney Water could deliver, how did you go about answering the question(s)?

    c. I answered the question(s) as though I would be getting the service levels and bill impacts described in the packages

    d. I answered the question(s) as though I would be getting different service levels or bill impacts to those described in the packages

IF SELECTED AN OPTION OTHER THAN 'CURRENT PACKAGE' IN AT LEAST ONE CHOICE QUESTION, SKIP Q25 AND GO TO Q26 (IN OTHER WORDS, Q25 SHOULD BE SHOWN ONLY TO RESPONDENTS WHO CHOSE 'CURRENT PACKAGE' IN ALL SIX CHOICE QUESTIONS)

25. Why did you select the current package in every choice question? (tick as many as apply)

    h. I didn't have enough time to properly consider the options

    i. I didn't have enough information to be confident choosing the options

    j. I disagree with the idea of people paying to avoid wastewater overflows

    k. I disagree with the idea of offering people money to face more wastewater overflows

    l. I am concerned that Sydney Water might put prices up without making the service improvements

    m. I am concerned that Sydney Water might let service get worse without reducing prices

    n. Other _____

26. Earlier in the survey we told you that your responses will affect the number of wastewater overflows that happen and also the amount you pay for wastewater services. To what degree do you expect the results of this survey will affect decisions made by Sydney Water?

    d. I believe it is very likely the survey will affect Sydney Water's decisions

e. I believe it is somewhat likely the survey will affect Sydney Water's decisions

f. I don't think the survey will affect any of Sydney Water's decisions

CITIZEN ONLY

27. How many wastewater overflows can you recall experiencing at home?

_____ overflows in

_____ years.

BUSINESS ONLY

28. How many wastewater overflows can you recall experiencing at your business?

_____ overflows in

_____ years.

CITIZEN ONLY

29. How many wastewater overflows can you recall experiencing away from home (e.g. at work)?

_____ overflows in

_____ years.

BUSINESS ONLY

30. How many wastewater overflows can you recall experiencing away from your business (e.g. at home)?

_____ overflows in

_____ years.

SKIP Q31 IF

CITIZEN ANSWER TO BOTH Q27 AND Q29 WAS ZERO

BUSINESS ANSWER TO BOTH Q28 AND Q30 WAS ZERO

31. When was the most recent wastewater overflow you experienced?

a. In the past 6 months

b. 6-12 months ago

c. 1-2 years ago

d. 3-5 years ago

e. More than 5 years ago

32. Approximately how many different wastewater overflows have you come to know about talking to your friends, relatives, colleagues or neighbours?

_____ overflows

33. How many times have you been caught in traffic that was clearly caused by a wastewater overflow or work being done on wastewater pipes?

a. Several times

b. Once or twice

c. Never, as far as I know

CITIZEN ONLY

34. How often do you have someone at home during business hours on weekdays?

a. Never / very rarely

b. Some of the time

c. Very often / all of the time

d. Prefer not to say

35. Is the place you live in:

a. Owned outright or with a mortgage

b. Being rented or occupied rent-free

c. Other (please specify) _____

36. Do you speak a language other than English at home?

a. No, English only **SKIP TO Q38**

b. Yes

37. What is the main language spoken at home?

a. Arabic

b. Australian Indigenous Languages

c. Cantonese

d. Croatian
e. Dutch
f. French
g. German
h. Greek
i. Hindi
j. Indonesian
k. Italian
l. Japanese
m. Korean
n. Lebanese
o. Macedonian
p. Mandarin
q. Polish
r. Punjabi
s. Serbian
t. Spanish
u. Tagalog
v. Turkish
w. Vietnamese
x. Other (please specify) _____
y. Prefer not to say

38. Are you of Aboriginal or Torres Strait Islander origin?

a. Yes
b. No
c. Prefer not to say

39. Which best describes your household:

a. Couple/family without children at home
b. Couple/family with children at home
c. One parent family
d. Group household

e. Single person household

f. Other

40. What is your work status?

a. Working full time

b. Working part time/casually

c. Student

d. Not currently employed

e. Home duties

f. Retired

g. Other

41. What is your approximate annual household income before tax?

a. Less than $41,600

b. Between $41,600 and $78,000

c. Between $78,000 and $104,000

d. Between $104,000 and $156,000

e. More than $156,000

f. Do not wish to answer

42. In what type of dwelling do you live?

a. Separate house

b. Semi-detached, row or terrace house, townhouse

c. Flat or apartment

d. Other

BUSINESS ONLY

43. Can you continue to operate your business with a wastewater overflow outdoors on your property?

a. Yes

b. No, my business would need to stop operation

c. Other (please specify) _____

44. Do you have clients/customers at your business premises?

a. Never / very rarely
b. Some of the time
c. Very often / all of the time
d. Prefer not to say

45. How much of your business activity takes place at your business premises?

a. All/most of our business activity
b. Some of our business activity
c. Little/none of our business activity

46. Is your place of business:

a. Owned outright or with a mortgage
b. Being rented or occupied rent-free
c. Other (please specify) _____

47. For how many years has your business been operating?

a. Less than 1 year
b. 1-2 years
c. 2-5 years
d. 6-10 years
e. More than 10 years

48. Are you…

a. Male
b. Female
c. Non-gender-specific
d. Prefer not to say

49. What is your age?

a. Less than 18 years
b. 18-29 years
c. 30-39 years
d. 40-49 years
e. 50-59 years
f. 60-69 years
g. 70-79 years

h. 80 years or more

50. What is your position or title within your business?

a. Owner / proprietor

b. Senior management

c. Other employee

51. Finally, is there any feedback you would like to provide on this survey?

_____
_____
_____
_____

Thank you for participating in this survey. Your opinions are very important.

D Questionnaire – digital meters

Project	Sydney Water CIPA
Engagement	Digital meters
Sample	Citizens n=800 and businesses n=300

Welcome…

Thank you for participating in this survey, which is being run by Pureprofile and the Centre for International Economics on behalf of Sydney Water.

As part of Sydney Water's focus on putting customers at the heart of everything we do, we are asking our customers to provide their views on digital water meters. Your input is very important and will affect the metering technology we use.

This questionnaire will take around 15 minutes to complete. You don't need to know anything about water meters, as background information is provided.

We wish to reassure you that this is genuine market research and as always your individual survey responses will remain confidential and anonymous at all times.

In the unlikely event of any technical difficulties please click on the technical support e-mail link.

For other enquiries, please contact Sydney Water on 1800 627 687.

Please Keep In Mind…

Do not use your Back or Forward browser buttons while you are taking this survey. Once you answer a question, you will not be able to go back and change your answer.

Before we go through to the main study we would like to ask you a number of questions to make sure we are interviewing a good cross section of people.

1. Are you:

   Please select one.

   a. A business owner or sole trader with a commercial premises **GO TO BUSINESS VERSION**

   b. Responsible for managing business operations at a commercial premises **GO TO BUSINESS VERSION**

c. None of the above **GO TO CITIZEN VERSION**

CITIZEN ONLY

Please fill out this questionnaire on behalf of your household.

BUSINESS ONLY

Please fill out this questionnaire on behalf of your business.

CITIZEN ONLY

2. Do you or anyone in your household work for any of the following industries/organisations?

Water supply or wastewater services

Market research

IPART (Independent Pricing and Regulatory Tribunal)

NSW Health in a role related to water quality regulation

NSW Environment Protection Authority

a. Yes **TERMINATE**

b. No

BUSINESS ONLY

3. Does your business operate in the water and wastewater service or market research industries?

a. Yes **TERMINATE**

b. No

TERMINATE PAGE

Thank you for your patience in answering these questions. Unfortunately, we do not need you to participate in our research this time, but we sincerely appreciate your time and assistance today.

To keep up to date with opportunities to be involved in ongoing research and consultation, visit https://www.sydneywatertalk.com.au/

CITIZEN ONLY

4. How does your household get water and wastewater bills?

   a. I get bills from Sydney Water

   b. I get bills from Sydney Water and from my body corporate

   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

   f. I don't pay a separate amount for water and wastewater **TERMINATE**

BUSINESS ONLY

5. How does your business get water and wastewater bills?

   a. I get bills from Sydney Water

   b. I get bills from Sydney Water and from my body corporate

   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

   f. I don't pay a separate amount for water and wastewater **TERMINATE**

CITIZEN ONLY

Please give a rough estimate of the amount you pay for water and wastewater services each quarter.

If you receive bills from Sydney Water:

- a small household, with no garden, using 25 kL each quarter, would pay $224
- a typical household, using 50 kL each quarter, would pay $276
- a large household or a household with a garden, using 75 kL each quarter, would pay $328

6. The amount I pay for water and wastewater services each quarter is about:

_____

BUSINESS ONLY

Please give a rough estimate of the amount your business pays for water and wastewater services each quarter.

If you receive bills from Sydney Water:

- a small business, using a similar amount to a residential property (50 kL each quarter), would pay around $280 per quarter
- a business with slightly larger (25mm) pipes connecting to our network, using three times more water than a typical residential property, would pay around $670 per quarter
- businesses with larger pipes and higher water usage would pay higher amounts.

7. The amount my business pays for water and wastewater services each quarter is about:

_____

CITIZEN ONLY

8. What is the postcode of your home address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

_____

BUSINESS ONLY

9. What is the postcode of your business address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

_____

CITIZEN ONLY

10. Are you… **CHECK QUOTAS**

    a. Male
    b. Female
    c. Non-gender-specific
    d. Prefer not to say

CITIZEN ONLY

11. What is your age? **CHECK QUOTAS**

a. Less than 18 years **TERMINATE**
b. 18-29 years
c. 30-39 years
d. 40-49 years
e. 50-59 years
f. 60-69 years
g. 70-79 years
h. 80 years or more

BUSINESS ONLY

12. How many employees do you have in your business (full time equivalents other than the proprietor)? **CHECK QUOTAS**

a. Non-employing / sole trader
b. 1-4 employees
c. 5-19 employees
d. 20-199 employees
e. 200 employees or more **TERMINATE**

BUSINESS ONLY

13. In which industry does your business mainly operate? **CHECK QUOTAS**

a. Accommodation and Food Services
b. Administrative and Support Services
c. Agriculture, Forestry and Fishing
d. Arts and Recreation Services
e. Construction
f. Currently Unknown
g. Education and Training
h. Electricity, Gas, Water and Waste Services
i. Financial and Insurance Services

j. Health Care and Social Assistance
k. Information Media and Telecommunications
l. Manufacturing
m. Mining
n. Other Services
o. Professional, Scientific and Technical Services
p. Public Administration and Safety
q. Rental, Hiring and Real Estate Services
r. Retail Trade
s. Transport, Postal and Warehousing
t. Wholesale Trade

This questionnaire is about digital water meters.

It provides background information on digital meters and the benefits you might get from them. It asks which benefits you're most interested in and your views on Sydney Water installing these meters, given they may cost more than existing meters.

Sydney Water wants to understand what customers think about the potential benefits of digital meters across Sydney, the Blue Mountains and the Illawarra.

Unlike traditional meters, which are read in person each quarter, digital meters can provide you with more frequent information about water usage on your property. This could be hourly data, updated once a day.

Digital meters would be read automatically, meaning we wouldn't need to enter your property.

Sydney Water understands the sensitive nature of the data that would be collected by these meters and would safeguard your privacy and the security of the data.

As part of any program to install digital meters, you would be able to choose whether to get the following notifications from Sydney Water (most likely via SMS to your phone):

- Leak alerts
- High use notifications
- Bill predictions

- Check-in alerts

CITIZEN ONLY

Sydney Water could also provide an app or website portal where you could log in to see more detailed information, e.g.:

- Hourly usage data
- Usage comparisons to similar household types e.g. based on the number of residents and land size

BUSINESS ONLY

Sydney Water could also provide an app or website portal where you could log in to see more detailed information, e.g.:

- Hourly usage data
- Usage comparisons to similar businesses e.g. based on the industry and land size

We'll now provide information on each of these features and ask if you think you would use them.

Leak alerts

Digital meters can detect continual water flow above a certain threshold, which may be due to a leak. Sydney Water could send you an alert or notification if you have continual flow at your property over 24 hours. This could be useful for identifying a continually running toilet or a hidden leak, for example.

14. If you had a digital meter, would you choose to receive leak alerts?
    a. I would use this feature
    b. I would be likely to use this feature
    c. I would be unlikely use this feature
    d. I would not use this feature

CITIZEN ONLY

High use notifications

Sydney Water could send you an alert or notification when your daily water use goes over an amount that you specify. This could be useful for catching watering systems that have been left on, or hoses being used to top up swimming pools, before they cause large water bills.

BUSINESS ONLY

High use notifications

Sydney Water could send you an alert or notification when your daily water use goes over an amount that you specify. This could be useful for catching watering systems that have been left on or malfunctioning equipment before they cause large water bills.

15. If you had a digital meter, would you choose to receive high use notifications?
    a. I would use this feature
    b. I would be likely to use this feature
    c. I would be unlikely use this feature
    d. I would not use this feature

Bill predictions

By understanding your average daily use, Sydney Water could send you an estimate of your next water bill early in the billing cycle. This could help you manage your finances by avoiding unexpected changes in quarterly bills.

16. If you had a digital meter, would you choose to receive bill predictions?
    a. I would use this feature

b. I would be likely to use this feature

c. I would be unlikely use this feature

d. I would not use this feature

CITIZEN ONLY

Check-in alerts

Sydney Water could allow you to get check-in alerts about water usage at other properties that have provided permission. For example, you could get an alert:

- when water is used at a vacant property or holiday house you manage
- when daily water use falls to zero at an elderly relative's property, which could alert you to a health problem.

BUSINESS ONLY

Check-in alerts

Sydney Water could allow you to get check-in alerts about water usage at other properties that have provided permission. For example, you could get an alert:

- when water is used over the weekend or a holiday period while the property isn't in use
- when daily water use falls to zero at a property you manage, which could alert you to an operational problem.

17. If you had a digital meter, would you choose to receive check-in alerts?

    a. I would use this feature

    b. I would be likely to use this feature

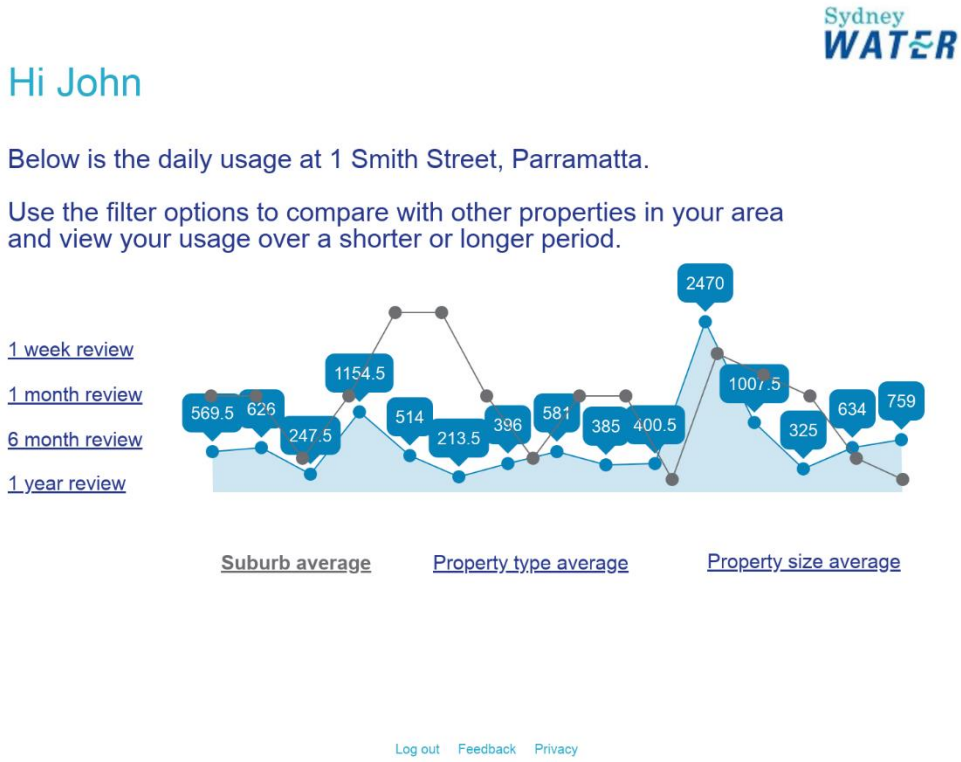
    c. I would be unlikely use this feature

    d. I would not use this feature

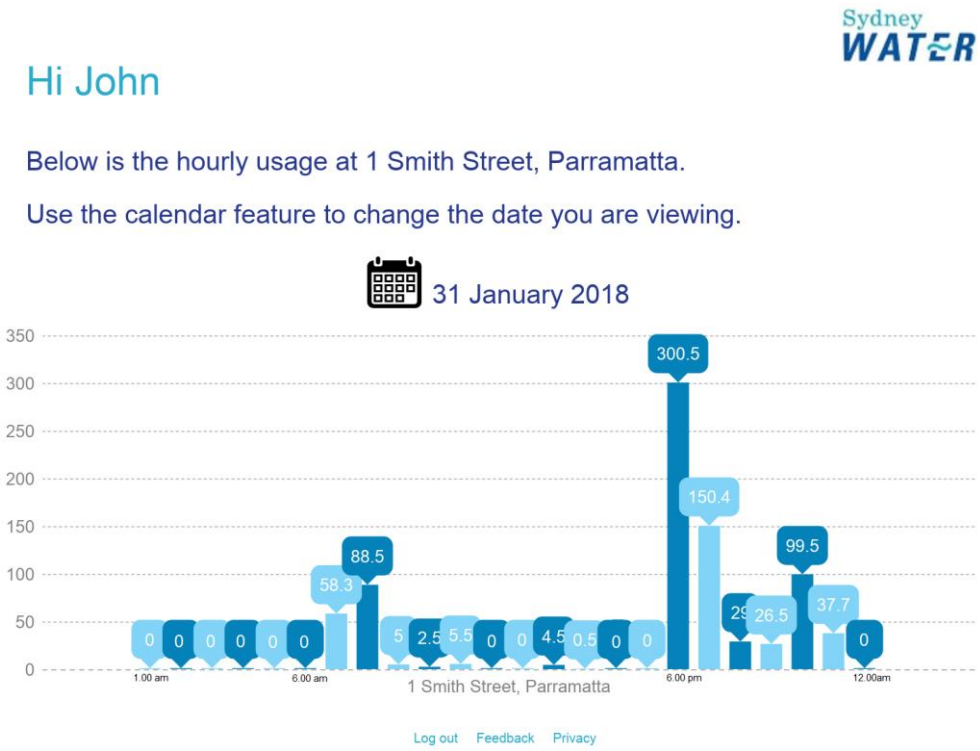
App and/or website portal

An app or web portal could show you:

- how your daily water usage compares to other properties with similar features. You may find this useful during times of drought when water conservation is even more important.



- hourly water usage, which would allow you to check the usage on your property in greater detail.



This information would not be "pushed" to you automatically as for the earlier options. You would need to log in and look at the data yourself.

18. If you had a digital meter, would you log in to an app or web portal?
    a. I would use this feature
    b. I would be likely to use this feature
    c. I would be unlikely use this feature
    d. I would not use this feature

Digital meters may be more expensive than the water meters we have used in the past. While some of that cost would be paid for by not having to read meters in person and from finding leaking pipes more quickly, some of the cost may need to be paid for by increases in water bills.

We want to know your views on installing digital meters.

Research has shown that people respond differently in surveys than they would in real life situations when they think they won't have to follow through with their answers.

Your answer to the next question will affect the decision to install digital meters, and also the size of your water bill. Please answer the question as if you were really facing this decision.

Also, please remember your income is limited and there may be other things you want to pay for.

CITIZEN ONLY

19. While digital meters would deliver the benefits described in this survey, they may be more expensive than ordinary meters. We are interested in knowing if these benefits would be of value to you as a customer. If a program to install digital meters would permanently increase the amount you pay for water and wastewater services by…

    $X <drawn from $1, $3, $5, $7, $10, $15> per quarter

    … would you vote for the program?

    a. At that cost to me, I definitely would vote for the program **SKIP Q21**
    b. At that cost to me, I probably would vote for the program **SKIP Q21**
    c. At that cost to me, I am not sure whether I would vote for the program **SKIP Q22**
    d. At that cost to me, I probably would not vote for the program **SKIP Q22**
    e. At that cost to me, I definitely would not vote for the program **SKIP Q22**

BUSINESS ONLY

20. While digital meters would deliver the benefits described in this survey, they may be more expensive than ordinary meters. We are interested in knowing if these benefits would be of value to you as a customer. If a program to install digital meters would permanently increase the amount you pay for water and wastewater services by…

    $X <drawn from 0.5%, 1%, 1.5%, 2%, 3%, 5% of the bill amount reported in Q7> per quarter

    … would you vote for the program?

    a. At that cost to me, I definitely would vote for the program **SKIP Q21**

b. At that cost to me, I probably would vote for the program **SKIP Q21**

c. At that cost to me, I am not sure whether I would vote for the program **SKIP Q22**

d. At that cost to me, I probably would not vote for the program **SKIP Q22**

e. At that cost to me, I definitely would not vote for the program **SKIP Q22**

21. What were the main reasons for your decision? (tick as many as apply) **ROTATE**

o. I share a water meter with one or more other households/businesses

p. Digital meters seem like poor value for money

q. The information about digital meters was too confusing

r. I didn't have enough information to be confident voting for digital meters

s. I disagree with the idea of people paying for information about their own water use

t. I am concerned Sydney Water will not be able to deliver all of the features described in this survey

u. I am concerned that Sydney Water might put prices up without providing the new meters/features

v. I am concerned about how Sydney Water might use detailed information about my water usage

w. I am concerned detailed information about my water usage might fall into the wrong hands

x. I do not care about my water usage

y. I do not think I should be the one paying for digital meters

z. Other _____

22. What were the main reasons for your decision? (tick as many as apply) **ROTATE**

a. The notification or app/website features

b. I am an early adopter of new technology

c. Digital meters will improve water conservation

d. Digital meters will remove the need for meter readers to access my property

e. Other _____

23. Earlier in the survey we told you that your responses will affect the decision to install digital meters and also the size of your water bill. To what degree do you expect the results of this survey will affect decisions made by Sydney Water?

g. I believe it is very likely the survey will affect Sydney Water's decisions

h. I believe it is somewhat likely the survey will affect Sydney Water's decisions

i. I don't think the survey will affect any of Sydney Water's decisions

Finally, a few questions about you.

24. Does your property have its own water meter?

a. Yes

b. No, I share a water meter with other dwellings/businesses

c. No, I don't have a water meter

d. Don't know

CITIZEN ONLY

25. Is the place you live in:

a. Owned outright or with a mortgage

b. Being rented or occupied rent-free

c. Other (please specify) _____

26. Do you speak a language other than English at home?

a. No, English only **SKIP TO Q28**

b. Yes

27. What is the main language spoken at home?

a. Arabic

b. Australian Indigenous Languages

c. Cantonese

d. Croatian
e. Dutch
f. French
g. German
h. Greek
i. Hindi
j. Indonesian
k. Italian
l. Japanese
m. Korean
n. Lebanese
o. Macedonian
p. Mandarin
q. Polish
r. Punjabi
s. Serbian
t. Spanish
u. Tagalog
v. Turkish
w. Vietnamese
x. Other (please specify) _____
y. Prefer not to say

28. Are you of Aboriginal or Torres Strait Islander origin?

a. Yes
b. No
c. Prefer not to say

29. Which best describes your household:

a. Couple/family without children at home
b. Couple/family with children at home
c. One parent family
d. Group household

e. Single person household

f. Other

30. What is your work status?

a. Working full time

b. Working part time/casually

c. Student

d. Not currently employed

e. Home duties

f. Retired

g. Other

31. What is your approximate annual household income before tax?

a. Less than $41,600

b. Between $41,600 and $78,000

c. Between $78,000 and $104,000

d. Between $104,000 and $156,000

e. More than $156,000

f. Do not wish to answer

32. In what type of dwelling do you live?

a. Separate house

b. Semi-detached, row or terrace house, townhouse

c. Flat or apartment

d. Other

BUSINESS ONLY

33. Do you have clients/customers at your business premises?

a. Never / very rarely

b. Some of the time

c. Very often / all of the time

d. Prefer not to say

34. How much of your business activity takes place at your business premises?

a. All/most of our business activity
b. Some of our business activity
c. Little/none of our business activity
d. Prefer not to say

35. Is your place of business:

a. Owned outright or with a mortgage
b. Being rented or occupied rent-free
c. Other (please specify) _____

36. For how many years has your business been operating?

a. Less than 1 year
b. 1-2 years
c. 2-5 years
d. 6-10 years
e. More than 10 years

37. Are you…

e. Male
f. Female
g. Non-gender-specific
h. Prefer not to say

38. What is your age?

i. Less than 18 years
j. 18-29 years
k. 30-39 years
l. 40-49 years
m. 50-59 years
n. 60-69 years
o. 70-79 years
p. 80 years or more

39. What is your position or title within your business?

a. Owner / proprietor
b. Senior management

c. Other employee

40. Finally, is there any feedback you would like to provide on this survey?

_____
_____
_____
_____

Thank you for participating in this survey. Your opinions are very important.

E Questionnaire – ocean outfalls/water pressure

Project	Sydney Water CIPA
Engagement	Wastewater ocean outfalls and water pressure
Sample	Citizens n=800 and businesses n=300

Welcome…

Thank you for participating in this survey, which is being run by Pureprofile and the Centre for International Economics on behalf of Sydney Water.

As part of Sydney Water's focus on putting customers at the heart of everything we do, we are asking our customers to provide their views on wastewater ocean outfalls and water pressure. Your input is very important and will affect public health and environmental outcomes on Sydney's coastline and the water pressure experienced by our customers.

This questionnaire will take around 15 minutes to complete. You don't need to know anything about wastewater ocean outfalls or water pressure, as background information is provided.

We wish to reassure you that this is genuine market research and as always your individual survey responses will remain confidential and anonymous at all times.

In the unlikely event of any technical difficulties please click on the technical support e-mail link.

For other enquiries, please contact Sydney Water on 1800 627 687.

Please Keep In Mind…

Do not use your Back or Forward browser buttons while you are taking this survey. Once you answer a question, you will not be able to go back and change your answer.

Before we go through to the main study we would like to ask you a number of questions to make sure we are interviewing a good cross section of people.

1. Are you:

   Please select one.

a. A business owner or sole trader with a commercial premises **GO TO BUSINESS VERSION**

b. Responsible for managing business operations at a commercial premises **GO TO BUSINESS VERSION**

c. None of the above **GO TO CITIZEN VERSION**

CITIZEN ONLY

Please fill out this questionnaire on behalf of your household.

BUSINESS ONLY

Please fill out this questionnaire on behalf of your business.

CITIZEN ONLY

2. Do you or anyone in your household work for any of the following industries/organisations?

Water supply or wastewater services

Market research

IPART (Independent Pricing and Regulatory Tribunal)

NSW Health in a role related to water quality regulation

NSW Environment Protection Authority

a. Yes **TERMINATE**

b. No

BUSINESS ONLY

3. Does your business operate in the water and wastewater service or market research industries?

a. Yes **TERMINATE**

b. No

TERMINATE PAGE

Thank you for your patience in answering these questions. Unfortunately, we do not need you to participate in our research this time, but we sincerely appreciate your time and assistance today.

To keep up to date with opportunities to be involved in ongoing research and consultation, visit https://www.sydneywatertalk.com.au/

CITIZEN ONLY

4. How does your household get water and wastewater bills?

   a. I get bills from Sydney Water

   b. I get bills from Sydney Water and from my body corporate

   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

   f. I don't pay a separate amount for water and wastewater **TERMINATE**

BUSINESS ONLY

5. How does your business get water and wastewater bills?

   a. I get bills from Sydney Water

   b. I get bills from Sydney Water and from my body corporate

   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

   f. I don't pay a separate amount for water and wastewater **TERMINATE**

CITIZEN ONLY

Please give a rough estimate of the amount you pay for water and wastewater services each quarter.

If you receive bills from Sydney Water:

- a small household, with no garden, using 25 kL each quarter, would pay $224
- a typical household, using 50 kL each quarter, would pay $276
- a large household or a household with a garden, using 75 kL each quarter, would pay $328

6. The amount I pay for water and wastewater services each quarter is about:

_____

BUSINESS ONLY

Please give a rough estimate of the amount your business pays for water and wastewater services each quarter.

If you receive bills from Sydney Water:

- a small business, using a similar amount to a residential property (50 kL each quarter), would pay around $280 per quarter
- a business with slightly larger (25mm) pipes connecting to our network, using three times more water than a typical residential property, would pay around $670 per quarter
- businesses with larger pipes and higher water usage would pay higher amounts.

7. The amount my business pays for water and wastewater services each quarter is about:

_____

CITIZEN ONLY

8. What is the postcode of your home address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

_____

BUSINESS ONLY

9. What is the postcode of your business address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

_____

CITIZEN ONLY

10. Are you… **CHECK QUOTAS**

    a. Male

b. Female

c. Non-gender-specific

d. Prefer not to say

CITIZEN ONLY

11. What is your age? **CHECK QUOTAS**

a. Less than 18 years **TERMINATE**

b. 18-29 years

c. 30-39 years

d. 40-49 years

e. 50-59 years

f. 60-69 years

g. 70-79 years

h. 80 years or more

BUSINESS ONLY

12. How many employees do you have in your business (full time equivalents other than the proprietor)? **CHECK QUOTAS**

a. Non-employing / sole trader

b. 1-4 employees

c. 5-19 employees

d. 20-199 employees

e. 200 employees or more **TERMINATE**

BUSINESS ONLY

13. In which industry does your business mainly operate? **CHECK QUOTAS**

a. Accommodation and Food Services

b. Administrative and Support Services

c. Agriculture, Forestry and Fishing

d. Arts and Recreation Services

e. Construction

f. Currently Unknown
g. Education and Training
h. Electricity, Gas, Water and Waste Services
i. Financial and Insurance Services
j. Health Care and Social Assistance
k. Information Media and Telecommunications
l. Manufacturing
m. Mining
n. Other Services
o. Professional, Scientific and Technical Services
p. Public Administration and Safety
q. Rental, Hiring and Real Estate Services
r. Retail Trade
s. Transport, Postal and Warehousing
t. Wholesale Trade

RANDOMLY ALLOCATE OR CYCLE RESPONDENTS TO SEE EITHER:

This questionnaire has three parts:

- Part 1 provides information on wastewater ocean outfalls and asks your views
- Part 2 provides information on minimum standards for water pressure and asks your views
- Part 3 asks some questions about you

OR

This questionnaire has three parts:

- Part 1 provides information on minimum standards for water pressure and asks your views
- Part 2 provides information on wastewater ocean outfalls and asks your views
- Part 3 asks some questions about you

THEN ORDER THE FOLLOWING PARTS ACCORDINGLY

PART ON WASTEWATER OCEAN OUTFALLS

This part of the questionnaire is about wastewater ocean outfalls at Sydney cliff faces.

It will cover:

- Background information on wastewater ocean outfalls at Sydney cliff faces, the impacts they are having on public health and environmental risks, and work Sydney Water can do to reduce those impacts
- Questions about whether you want Sydney Water to do that work, given the cost would need to be recovered through water and wastewater bills
- Questions about your household

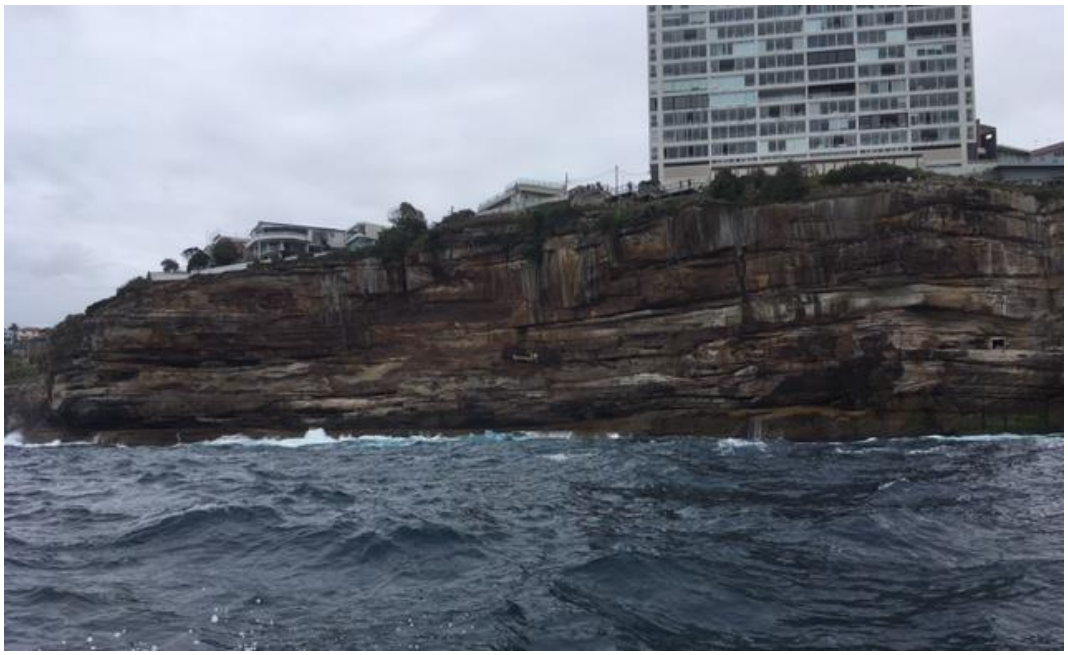
Wastewater is the used water that goes down sinks, toilets and drains.

Most of Sydney's wastewater is treated and released deep in the ocean, but there are three outfalls in Sydney, built between 1916 and 1936, that release raw (untreated) wastewater at the base of cliff faces under the sea.

This is the only wastewater system in New South Wales that that puts untreated wastewater into the ocean 365 days of the year.

Every day, these three outfalls put four Olympic swimming pools' worth of raw wastewater into the ocean, along with 2-3 wheelie bins' worth of plastics and hygiene products.

Despite this, water quality testing that occurs every six days at recreational areas near the outfalls continuously shows very good water quality. The pollutants are in a relatively small area of ocean at the bottom of cliff faces.

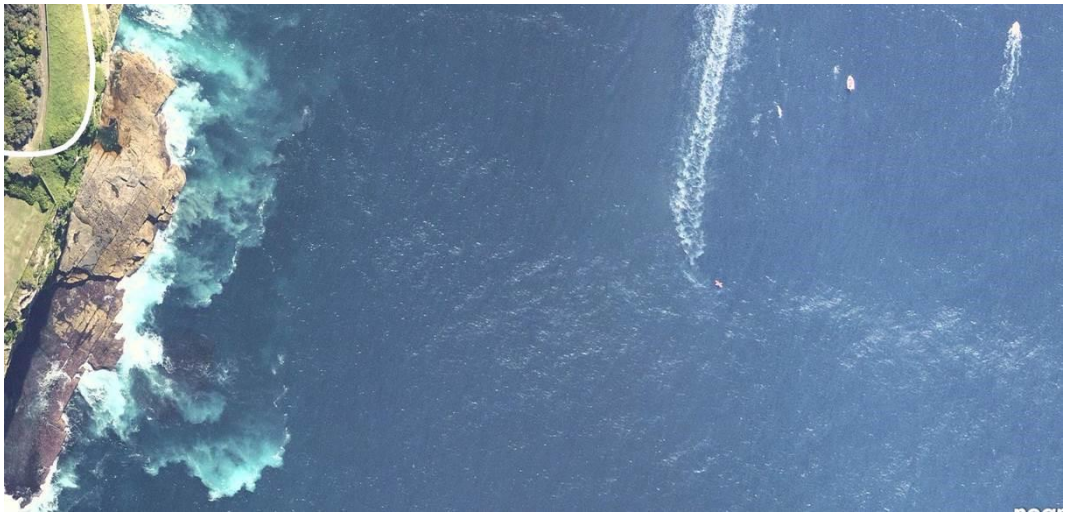


There are two main problems caused by the raw wastewater outfalls:

- Public health risks
- Ecosystem impacts

Public health risks close to the outfall sites

- A Sydney Water pollution study found that around 2000 people visit the affected areas each year for spear fishing, rock fishing and swimming
- Around 300 people have direct contact with pollutants through organised swim and paddle events



Ecosystem impacts close to the outfall sites

- Degraded ocean floor habitat, with barren areas and 'brown fuzz'
- Increased growth of algae
- More opportunistic species in the area
- Floating rubbish, which can harm sea creatures by swallowing or becoming tangled
- A bad smell, including on cliff tops
- Visible 'plume' in the water 75% of the time, including oil and grease on top of the water

Sydney Water can reduce these public health and ecosystem impacts by investing in new infrastructure to divert the raw wastewater into another part of the network where it will be treated.

After this investment, no wastewater would be released from the three outfalls during dry weather.

Wastewater flows are highest when it rains, because rain gets into the wastewater system through faulty private plumbing and cracks in pipes. The new infrastructure would not be able to divert all of this extra wastewater. As a result, some diluted raw wastewater would be released from the three outfalls when it rains.

This new infrastructure would come at a cost that needs to be recovered in Sydney Water bills paid by you and other customers. We want to know your views on this project.

Your answer to the next question will affect the decision about how much raw wastewater is released into the ocean and also the size of your water bill. Please answer the question as if you were really facing this decision.

Also, please remember your income is limited and there may be other environmental causes you want to pay for.

CITIZEN ONLY

14. Sydney Water could do a project to stop the daily release of raw wastewater from cliff face outfalls so that they instead release only when it rains. If this project added a one-off amount of…

    $X <draw from $1, $3, $5, $7, $10, $15, $25, $35, $50>

    …to one of your water and wastewater bills, would you vote for the program?

    a. At that cost to me, I definitely would vote for the program **SKIP Q16**
    b. At that cost to me, I probably would vote for the program **SKIP Q16**
    c. At that cost to me, I am not sure whether I would vote for the program
    d. At that cost to me, I probably would not vote for the program
    e. At that cost to me, I definitely would not vote for the program

BUSINESS ONLY

15. Sydney Water could do a project to stop the daily release of raw wastewater from cliff face outfalls so that they instead release only when it rains. If this project added a one-off amount of…

    $X <draw from 0.5%, 1.0%, 1.5%, 2.0%, 3.0%, 5.0%, 7.5%, 10.0%, 15.0% of the quarterly bill amount reported in Q7>

    …to one of your water and wastewater bills, would you vote for the program?

    a. At that cost to me, I definitely would vote for the program **SKIP Q16**
    b. At that cost to me, I probably would vote for the program **SKIP Q16**
    c. At that cost to me, I am not sure whether I would vote for the program
    d. At that cost to me, I probably would not vote for the program
    e. At that cost to me, I definitely would not vote for the program

16. What were the main reasons for your decision? (tick as many as apply) **ROTATE**

a. The project is not good value for money
b. The project description was too confusing
c. I didn't have enough information to be confident voting for the project
d. I disagree with the idea of people paying to stop raw wastewater being put in the ocean
e. I am concerned that Sydney Water might put prices up without fixing the wastewater outfalls
f. I am concerned Sydney Water would not put my bill back down after the one-off increase
g. Ocean water quality in a small, inaccessible area is not a big problem
h. I do not visit Sydney's coastline very often
i. I do not think I should be the one paying for the project
j. Other _____

CITIZEN ONLY

17. How often do you visit the rocky parts of Sydney's coastline?

a. Never / very rarely
b. Some of the time
c. Very often

18. Which activities does your household use Sydney's beaches and coastline for? (tick all that apply)

a. Swimming
b. Fishing
c. Paddling/kayak
d. My household never uses Sydney's beaches or coastline
e. Other (please specify) _____

BUSINESS ONLY

19. Is your business affected by the reputation of Sydney's coastline?

a. My business is significantly affected
b. My business is slightly affected
c. My business is not affected

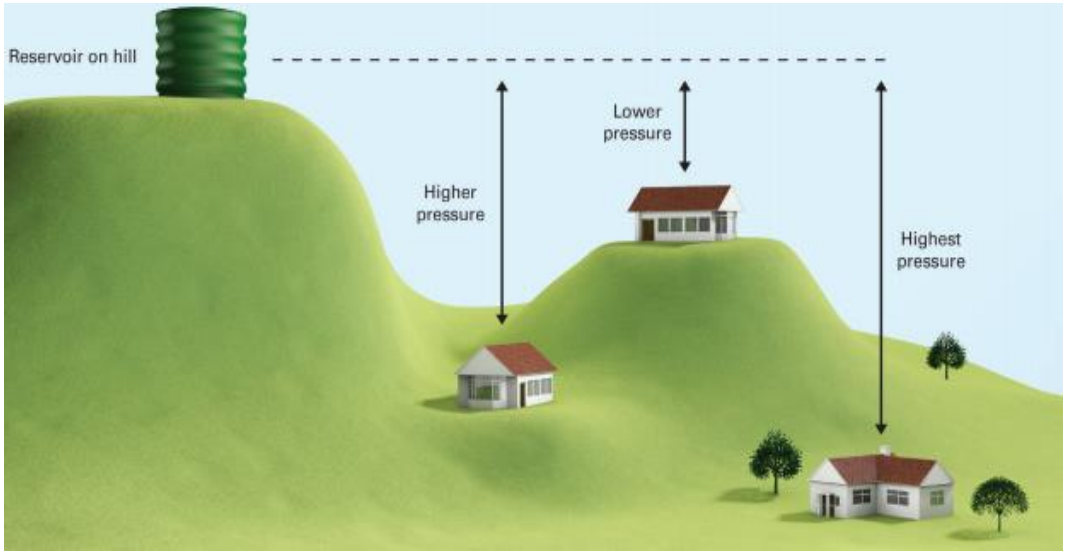
END OF WASTEWATER OCEAN OUTFALLS SECTION

PART ON WATER PRESSURE

This part of the questionnaire is about minimum standards for water pressure.

It provides background information on water pressure and a small group of customers that experience chronic low pressure. It then asks whether you would be willing to pay an additional amount on your bill to improve service to these customers.

Water gets to customers through a network of water supply zones. Water reservoirs are located at high points in each water supply zone. Water gets from the reservoir across the zone using gravity. Water pressure varies at different locations in the zone depending on how far you are from the reservoir and your elevation in relation to the reservoir.



Water pressure in our system can fall when people are using water or when a pipe breaks. In areas with lower pressure, this may result in slow flow of water from your taps. You may notice:

- taking a few minutes to fill a bucket
- only a trickle of water coming from second-floor taps/shower
- not being able to use water in more than one place in the home (e.g. not being able to shower while using the washing machine).

There are around 130 properties in Sydney that experience these low-water-pressure events on an almost daily basis.

Sydney Water can improve water pressure to these 'worst-served' properties by investing in water pressure booster pumps.

This investment comes at a cost that would need to be paid for by Sydney Water bills.

We want to know whether you would be willing to pay to bring the service level for these 130 properties up to the minimum level experienced by the rest of Sydney, the Blue Mountains and the Illawarra.

Your answer to the next question will affect the decision whether to improve service to customers experiencing ongoing low water pressure and also the size of your water bill. Please answer the question as if you were really facing this decision.

Also, please remember your income is limited and there may be other things you want to pay for.

CITIZEN ONLY

20. If a program to improve water pressure to 130 worst-served customers added a one-off amount of…

    $X <draw from $1, $3, $5, $7, $10, $15>

    … to one of your water and wastewater bills, would you vote for the program?

    a. At that cost to me, I definitely would vote for the program **SKIP Q22**
    b. At that cost to me, I probably would vote for the program **SKIP Q22**
    c. At that cost to me, I am not sure whether I would vote for the program
    d. At that cost to me, I probably would not vote for the program
    e. At that cost to me, I definitely would not vote for the program

BUSINESS ONLY

21. If a program to improve water pressure to 130 worst-served customers added a one-off amount of…

    $X < draw from 0.5%, 1.0%, 1.5%, 2.0%, 3.0%, 5.0% of quarterly bill amount reported at Q7>

    … to one of your water and wastewater bills, would you vote for the program?

    a. At that cost to me, I definitely would vote for the program **SKIP Q22**
    b. At that cost to me, I probably would vote for the program **SKIP Q22**
    c. At that cost to me, I am not sure whether I would vote for the program
    d. At that cost to me, I probably would not vote for the program
    e. At that cost to me, I definitely would not vote for the program

22. What were the main reasons for your decision? (tick as many as apply) **ROTATE**

    a. The program seems like poor value for money
    b. The information about water pressure was too confusing
    c. I didn't have enough information to be confident voting for the program
    d. I disagree with the idea of people paying to get a basic level of service
    e. I am concerned that Sydney Water might put prices up without fixing the water pressure problem
    f. I do not care about the water pressure experienced by other people
    g. I do not think I should be the one paying for the program
    h. Other _____

23. How many times have you experienced low water pressure at your property?

    a. Never
    b. Once or twice
    c. Three times or more

24. Has a friend, relative, colleague or neighbour told you about a water pressure failure they experienced and how it affected them?

    a. Yes
    b. No / Don't know

BUSINESS ONLY

25. Can you continue to operate your business during a water pressure failure?

    a. Yes

    b. No, my business would need to stop operation during a water pressure failure

    c. My business would need to stop operation if the water pressure failure lasted for a period of more than (please specify) _____

END OF WATER PRESSURE SECTION

26. Earlier in the survey we told you that your responses will affect decisions about wastewater ocean outfalls and water pressure and also the size of your water bill. To what degree do you expect the results of this survey will affect decisions made by Sydney Water?

    a. I believe it is very likely the survey will affect Sydney Water's decisions

    b. I believe it is somewhat likely the survey will affect Sydney Water's decisions

    c. I don't think the survey will affect any of Sydney Water's decisions

CITIZEN ONLY

27. Is the place you live in:

    a. Owned outright or with a mortgage

    b. Being rented or occupied rent-free

    c. Other (please specify) _____

28. Do you speak a language other than English at home?

    a. No, English only **SKIP TO Q38**

    b. Yes

29. What is the main language spoken at home?

    a. Arabic

    b. Australian Indigenous Languages

    c. Cantonese

    d. Croatian

e. Dutch
f. French
g. German
h. Greek
i. Hindi
j. Indonesian
k. Italian
l. Japanese
m. Korean
n. Lebanese
o. Macedonian
p. Mandarin
q. Polish
r. Punjabi
s. Serbian
t. Spanish
u. Tagalog
v. Turkish
w. Vietnamese
x. Other (please specify) _____
y. Prefer not to say

30. Are you of Aboriginal or Torres Strait Islander origin?

a. Yes
b. No
c. Prefer not to say

31. Which best describes your household:

a. Couple/family without children at home
b. Couple/family with children at home
c. One parent family
d. Group household
e. Single person household

f. Other

32. What is your work status?

a. Working full time
b. Working part time/casually
c. Student
d. Not currently employed
e. Home duties
f. Retired
g. Other

33. What is your approximate annual household income before tax?

a. Less than $41,600
b. Between $41,600 and $78,000
c. Between $78,000 and $104,000
d. Between $104,000 and $156,000
e. More than $156,000
f. Do not wish to answer

34. In what type of dwelling do you live?

a. Separate house
b. Semi-detached, row or terrace house, townhouse
c. Flat or apartment
d. Other

BUSINESS ONLY

35. Do you have clients/customers at your business premises?

a. Never / very rarely
b. Some of the time
c. Very often / all of the time
d. Prefer not to say

36. How much of your business activity takes place at your business premises?

a. All/most of our business activity

b. Some of our business activity
c. Little/none of our business activity
d. Prefer not to say

37. Is your place of business:

a. Owned outright or with a mortgage
b. Being rented or occupied rent-free
c. Other (please specify) _____

38. For how many years has your business been operating?

a. Less than 1 year
b. 1-2 years
c. 2-5 years
d. 6-10 years
e. More than 10 years

39. Are you…

a. Male
b. Female
c. Non-gender-specific
d. Prefer not to say

40. What is your age?

a. Less than 18 years
b. 18-29 years
c. 30-39 years
d. 40-49 years
e. 50-59 years
f. 60-69 years
g. 70-79 years
h. 80 years or more

41. What is your position or title within your business?

a. Owner / proprietor
b. Senior management

c. Other employee

42. Finally, is there any feedback you would like to provide on this survey?

_____
_____
_____
_____

Thank you for participating in this survey. Your opinions are very important.

THE CENTRE FOR INTERNATIONAL ECONOMICS
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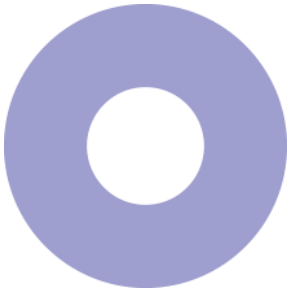
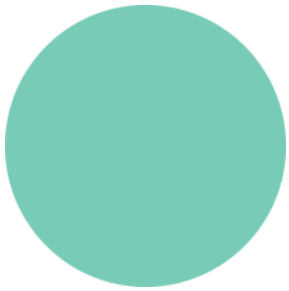

SW231 06/19

Appendix 3C

CIPA Phase 2_Forums and surveys report

Price Proposal 2020–24

COMMERCIAL IN CONFIDENCE

FINAL REPORT

Deliberative forums, discussion groups, interviews and tariff surveys

Customer-informed IPART submission (CIPA) Phase 2

Prepared for
Sydney Water

4 October 2018

THE CENTRE FOR INTERNATIONAL ECONOMICS
www.TheCIE.com.au

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BOXES, CHARTS AND TABLES

Executive Summary

Background

This report details the method and results from the tariff structure component of the second phase of Sydney Water's customer engagement plan for 2018. This phase of the engagement focused on tariff structures and willingness to pay. A separate report summarises the findings from the willingness to pay components.

The tariff structures component of the customer engagement involved a series of forums, discussion groups, interviews and surveys conducted during July to September 2018 with samples of customers that are representative of the population in Sydney Water's operating area (Sydney, Blue Mountains and the Illawarra) and proportionate to the materiality of the topics.

These engagement activities focused on gathering evidence of customer responses and preferences regarding:

- customer priorities from phase 1
- rebate changes in response to phase 1
- pricing principles,
- water pricing options,
- wastewater pricing options, and
- solutions to rainwater in the wastewater system.

How we talked to customers

- **In total, for the tariff structures component we engaged with around 1 874 customers – 1 609 citizens, 265 small and medium businesses and 6 significant business customers, as well as 4 members of the Customer Council**

The activities in this component were:

- two pilot forums with Sydney Water staff at Parramatta and Potts Hill
- seven deliberative forums with between 68-82 citizens participating in each forum (535 citizens in total), held in:
  - Hornsby
  - Penrith
  - Wollongong
  - Parramatta
  - CBD

  - Campbelltown, and
  - Hurstville.
- ten group discussions with 6-10 people in each group (86 customers in total):
  - one Mandarin in-language group
  - one Cantonese in-language group
  - one Arabic in-language group
  - one Vietnamese in-language group
  - one Greek in-language group
  - one Hindi group
  - two financially-vulnerable customer groups
  - two small-medium enterprises groups
- an online tariff survey, completed by:
  - 1003 citizens; and
  - 250 small-medium enterprises.
- six in-depth interviews with significant business customers.
- four in-depth interviews with the Customer Council

The vast majority of participants in this phase of the engagement were bill payers – either partially or wholly. They were from across Sydney Water's area of operations and represented a range of genders, ages, languages, ATSI, tenure types (owners and renters), household types, family types, dwelling types, and employment status.

Participants from the Phase 1 forums and discussion groups were invited back for Phase 2. The return rate was 47% for the forums overall, but 61% across the 4 locations that were consistent across Phases 1 and 2.

Participating businesses represented a range of sizes and industries.

Citizens speaking a language other than English at home (LOTE) were slightly under-represented in the survey sample and the survey results were reweighted accordingly.

Similarly, the proportion of LOTE representation in the forums was slightly lower than that in the underlying populations. The inclusion of in-language groups was used to ensure further LOTE representation and this variable was also weighted during analysis of data from keypad polling at the forums.

What customers told us

Reactions to the research undertaken to date

- Participants felt that the findings presented from Phase 1 of the engagement reflected their views
- In particular, they supported the six 'customer priorities' identified from Phase 1 – 55% at the forums stated that the priorities fully reflected their views with a further 39% reporting that they partially reflected their views

- Residents in the forums and discussion groups believed that quality drinking water, fair and affordable pricing and reliable services were the most important priorities
- They thought that environmental protection should be focussed on above responsive customer service (particularly at the current time of drought) and that water security should continue to be a priority at this time
- Education/increasing awareness was identified as a potentially missing priority (although this could be incorporated into some of the other priorities i.e. increasing awareness about what Sydney Water is doing in relation to water security and environmental protection in particular)
- A reliable service was particularly important to small and medium business customers
- Pricing was key to significant business participants and they also requested good communication and a greater level of support and understanding by Sydney Water, particularly around testing and quality issues related to discharge

Proposed rebate changes

- Overall the proposed changes to rebates were well received in all components of the engagement - 94% at the forums supporting the changes either strongly or slightly
- There was support for all the individual rebate changes with consistent support across the demographic groups – in some cases the older age groups supported the changes more strongly
- 62% strongly supported and 26% slightly supported the boil water alert rebate change at the forums. The boil water alert was perceived as an important health risk and it was thought that the increase to the rebate would help recoup costs associated with purchasing bottled water or increased electricity charges associated with boiling water
- 55% strongly supported and 29% slightly supported the discoloured water rebate change at the forums. Although Sydney Water reassured participants that discoloured water was safe to drink and use, most believed that they would have to 'flush it out' of the system by running the water for a while before they used it and that it would cause some inconvenience. Some also suggested they would purchase bottled water. Therefore the increase to the rebate was well received
- 51% strongly supported and 33% slightly supported the wastewater overflow rebate changes at the forums. Support was stronger for the increase to the rebate for a one off event, than the reduction for the second event (down from $600 to $150)
- Most participants agreed that the changes to rebates for interruptions were positive and reflected the findings from Phase 1, i.e. unplanned interruptions were more inconvenient than planned and should receive a higher rebate. In fact, some even called for the difference to be larger than proposed
  - 54% strongly supported and 30% slightly supported the rebate change for planned interruptions at the forums;
  - 51% strongly supported and 36% slightly supported the rebate change for unplanned interruptions at the forums;
- Although still supportive overall (45% strongly supported and 31% slightly supported at the forums), there were some concerns about the rebate changes for water pressure

failures as for a single event it was proposed that it be reduced to nil. With a longer water pressure failure that could impact people's daily routines it was believed that a rebate was appropriate;

- LOTE participants were supportive of the changes to rebates overall and rather were concerned about the potential impacts of these types of events on those who do not speak English as their first language. Communication during these events was seen to be important to these customers, ideally in their first language.
- Small and medium business participants believed that the rebates were not large enough for those significantly affected by these events. They suggested that all should be linked to meter size rather than just the rebates that reflect the annual water service charges.

Pricing structure & bills

- Forum and group participants called for any revisions to the pricing structure and billing to attempt to:
  - Find ways to educate about/incentivise water saving behaviours
  - Increase the variable component/ allow for greater control over the bill
  - Ensure future supply – even if this means charging customers a bit more
  - Support low income earners and disadvantaged customers
  - Offer more transparency and clear information on pricing and costs

Water pricing options

- In general there was a preference by residential participants to increase the variable charge and decrease the fixed charge (45%) rather than increase the fixed charge and decrease the variable charge (21%). There was also a large proportion who preferred that the balance between fixed and variable remains as it is currently (34%)
  - Of the presented scenarios, Scenario C was the preferred option by most residential customers as it reflected the above sentiment (increase in variable charge and decrease in fixed charge) – just over half in the forums voted for this option (52%). It was thought to encourage reduced water usage, and appeared to benefit most of the main customer groups. Although high consumers were thought to be disadvantaged under this scenario it was argued that it was only a small increase in price. The current scenario was second most preferred (34%) and most similar (second highest usage charge) to Scenario C
- There were some suggestions that Sydney Water should consider a tiered variable pricing structure which would increase at higher levels of usage, to encourage water saving behaviours
- There were also suggestions that customers should be able to choose the 'pricing plan' that suits their individual circumstances like they can in other industries such as electricity and telecommunications
- A greater proportion of the financial hardship customers preferred the current scenario than those in the forums, because they generally just paid the usage charge, so if was feared that any increase in this would be passed onto them

- The tariff survey showed a strong preference for the proportions to remain the same as they are currently. However, this could be due to the complexity of the slider activity included in the survey resulting in respondents being more likely to choose the status quo
- There was concern by the Customer Council representatives that Scenario C might affect a disproportionate number of those on lower incomes and from Aboriginal backgrounds as they are more likely to have larger families
- There is a slightly stronger preference for any changes in pricing to be made gradually over 2 to 4 years rather than upfront (56% if the variable is increased and 58% if the fixed is increased), with a slight preference for over 2 years rather than over 4 years
- Again, for LOTE customers the timing of the transition was not as important as Sydney Water communicating any changes in advance in a clear and easy to understand way, preferably in languages other than English
- Small and medium business customers did not have a strong preference as the bill impacts were seen to be negligible. Those who did choose a scenario seemed to go for Scenario C since a higher usage charge could provide more possibility of reducing bills by reducing water usage. They favoured an up-front change rather than a gradual one
- The significant business customers reported that the water charges were an insignificant proportion of their bills so the decision for them was not of high importance. Since they were purely price driven Scenario A was the obvious choice for them. Although as with the small and medium businesses, some suggested that a higher usage charge could encourage the adoption of water saving measures.

Wastewater pricing options

- Overall, the current approach with one fixed price was the preferred pricing structure for wastewater across all engagement components with citizens
  - 54% at the forums and 43% in the residential survey preferred the current approach with a fixed charge only
- Although there was much discussion at the forums, there was an overall preference for fixed charges to remain the same across houses and apartments;
  - 63% at the forums and 39% in the residential survey believed that all dwellings should pay the same fixed charge
- At the forums, while there was interest and general support for a usage charge in principle, many disagreed with the use of a set discharge factor as it was not thought to be an accurate reflection of the actual volume of wastewater discharged from a premises
- There were also concerns about how a usage charge would impact their bill and that it would make it more complex
- The small and medium business customers were asked to consider the proportion of fixed versus variable charges since they are already charged a variable component. They preferred a higher wastewater usage charge and lower fixed charge due to the

fact that they believed that with a higher usage charge they could make some cost savings by using less water

- The reverse was true for the significant business customers – they generally preferred the higher fixed and lower variable charge since this resulted in more substantial cost savings and a greater degree of predictability.

Rainwater in the wastewater system

- There was overwhelming support for Sydney Water to fix the problem of rainwater and groundwater in the wastewater system at the source, rather than continue to just build bigger pipes, storages and overflows
- Forum participants felt that the issue was important and would continue to worsen over time if it was not addressed directly
- Fixing the issue at the source was also presented as the more cost effective solution of the two options
- In terms of who should pay, because the cost to the individual was seen to be so significant (potentially around $13,000) it was thought to be fairest to spread it across the customer base (77% chose this option at the forums)
- However, it was felt that those who had knowingly installed illegal stormwater connections should still be penalised
- Small and medium business participants were not as consensual in their opinions with a mix between all options preferred.

1 Introduction

Background

This report details the method and results from the second phase of Sydney Water's customer engagement plan for 2018. This phase of customer engagement involved a series of forums, discussion groups, interviews and surveys conducted during July to September 2018 with samples of customers that are representative of the Sydney population and proportionate to the materiality of the topics.

These engagement activities focused on communicating and gaining feedback on some of the Phase 1 research findings and gathering evidence of customer attitudes and preferences regarding:

- customer priorities from phase 1
- rebate changes in response to phase 1
- pricing principles,
- water pricing options,
- wastewater pricing options, and
- solutions to rainwater in the wastewater system.

A primary consideration when selecting these topics for engagement was a desire to inform Sydney Water's operating licence and pricing submissions to IPART.

2 How we talked with customers

- **In total, in the tariff structure component we engaged with around 1 874 customers – 1 609 citizens, 265 small and medium businesses and 6 significant business customers, as well as 4 members of the Customer Council**

The engagement employed a range of activities to ensure an inclusive and accessible approach that gives all customers a voice and to apply the most effective techniques to each topic and questioning area.

2.1 Engagement activities

Engagement activities
Two pilot forums with Sydney Water staff at Parramatta and Potts Hill
Seven deliberative forums with between 68-82 citizens participating in each forum (535 citizens in total), held in:
▪ Hornsby
▪ Penrith
▪ Wollongong
▪ Parramatta
▪ CBD
▪ Campbelltown and
▪ Hurstville
Ten group discussions with 6-10 people in each group (86 customers in total):
▪ one Mandarin in-language group
▪ one Cantonese in-language group
▪ one Arabic in-language group
▪ one Vietnamese in-language group
▪ one Greek in-language group
▪ one Hindi group
▪ two financially-vulnerable customer groups
▪ two small-medium enterprises groups
An online tariff survey, completed by:
▪ 1003 citizens; and
▪ 250 small-medium enterprises
▪ six in-depth interviews with significant business customers
▪ four in-depth interviews with the Customer Council.

Source: CIE/Woolcott

Deliberative forums

Dates and locations

Two pilot deliberative forums were held with staff in Parramatta and Potts Hill in July 2018.

Seven deliberative forums were held in late July and August 2018 at the locations set out in table 2.2.

2.2 Deliberative forums

Location	Venue	Date	Participants	Returning participants
Hornsby	Hornsby RSL	26/07/2018	71	26* (37%)
Penrith	Penrith Panthers	30/07/2018	82	59 (72%)
Wollongong	WIN Stadium	01/08/2018	68	46 (68%)
Parramatta	Parramatta RSL	07/08/2018	79	42 (53%)
CBD	Sydney Tattersalls Club	09/08/2018	79	42 (53%)
Campbelltown	Campbelltown Catholic Club	13/08/2018	81	1* (1%)
Hurstville	Club Central Hurstville	14/08/2018	75	34* (45%)
Total			**535**	**250 (47%)**

Source: CIE/Woolcott

* Please note that forums were not conducted in these locations in Phase 1.

The return rate was 47% for the forums overall, but 61% across the 4 locations that were consistent across both Phases 1 and 2.

Summary statistics on the characteristics of participants are provided in Chapter 4.

Please note that the keypad voting charts include a base of 529 because a small number of participants either did not provide all of their demographic data so could not be included in the weighted data, or did not vote in some of the questions at the forums.

Approach

The forums consisted of a mix of round table discussions, presentations/speakers from the front, participant response and feedback sessions from tables (so that participants could hear the views from other tables in the room). Participants spent most of the time working in small groups on tables of eight to ten.

The forums nearer the CBD ran from 5.30pm to 9.00pm on weekday evenings with those further away running from 6.00pm-9.30pm to enable those who work in the city to travel back to their suburb to attend. These timings allowed those with a full-time job to attend the forums and provided enough time for the provision of detailed information so that participants were able to develop a clear understanding of the issues and of the options facing them.

Woolcott Research provided a lead facilitator, Ian Woolcott (who chaired the sessions and managed the flow and timing), eight table facilitators and a support staff member.

The Woolcott Research table facilitators ensured that all issues were covered in the discussions on tables and that everyone's views were heard and captured. They ensured that no one participant dominated the discussion at their table and that everyone had a chance to have their say and provide feedback. They also probed into issues that arose within the discussion to ensure that sufficient detail was gained. The facilitator also ensured that all citizens understood how to participate in the whole-of-forum polling process on key questions at several points during the forums.

Laptops were used at each table for facilitators to capture the table's discussions. Each laptop was set up to offer prompts to guide the discussion and time-coded storage of group discussion summaries, which were downloaded into grids for the analysis.

Keypad polling was also included whereby participants were each given a handheld device that was used to answer multiple-response questions shown on screen, with results given in real time.

Each table included a mix of demographics in terms of age, gender and language.

Sydney Water staff presented information to the forum and were on hand to provide answers to any questions participants had about the issues.

The content of the forums is described in detail in Chapter 3.

Discussion groups

Dates and locations

Ten discussion groups were held during August 2018 with the customer segments set out in table 2.3.

2.3 Discussion groups

Customer segment	Location	Date	Participants
Cantonese	Eastgardens	18/08/18	9
Mandarin	Eastgardens	11/08/18	10
Hindi	Epping	11/08/18	9
Greek	Eastwood	12/08/18	9
Arabic	Carramar	09/08/18	10
Vietnamese	Chipping Norton	04/08/18	10
Financially vulnerable	Parramatta	22/08/18	8
Financially vulnerable	CBD	20/08/18	6
Small-medium enterprise	Parramatta	22/08/18	7
Small-medium enterprise	CBD	20/08/18	8
Total			**86**

Source: CIE/Woolcott

Summary statistics on the characteristics of participants are provided in Chapter 4.

Approach

Although the forums involved people from diverse backgrounds, including citizens speaking a language other than English at home (LOTE), small-medium enterprises (SMEs) and those on low incomes, it is best practice for engagement programmes to include supplementary engagement with these groups, to ensure their voices are heard.

Six 'in-language' group discussions were conducted with people who did not speak English well or at all. These were conducted with those who speak Mandarin, Cantonese, Arabic, Vietnamese, Hindi and Greek in locations with large populations of these speakers. These languages were chosen because they have the highest number of speakers in the Greater Sydney area. They were conducted by bilingual researchers in the participants' first language by the Cultural and Indigenous Research Centre Australia (CIRCA). They were held in settings where participants were comfortable and able to speak freely.

Two group discussions were conducted with customers in financial hardship, one in Parramatta and one in the CBD. Customers who had had difficulty paying bills (i.e. had asked for an extension) in the last 12 months and who held a health/low income card were recruited for these sessions.

Two discussion groups were also conducted with small and medium size enterprises (SMEs). The participants were the water decision makers in the business, i.e. those who would have a role in interacting with Sydney Water either if there was a water interruption or wastewater overflow, or by paying water bills.

Woolcott Research and Engagement facilitated the financial hardship and SME groups. These groups lasted for approximately 1.5 hours and were conducted at 6pm and 7.30pm on a weekday evening. They were conducted at research facilities so that Sydney Water staff could view the sessions, but they did not present the information.

The content of the discussion groups is described in detail in Chapter 3.

In-depth interviews

Dates

Six in-depth interviews were held with significant business customers and four with Customer Council members during September 2018.

Approach

All interviews were conducted by telephone with materials being sent by email prior to the interviews.

The content of the stakeholder interviews is described in detail in Chapter 3.

Tariff survey

The second phase of the engagement program included two online tariff surveys – one with citizens and one with small and medium business customers. They were programmed and hosted by Woolcott Research and Engagement and the survey samples were obtained through a reputable and quality-assured research panel provider: Lightspeed Research.

The surveys were approximately 10-15 minutes in length and were live from 31 August 2018 to 28 September 2018. They were completed by 1003 citizens and 250 SMEs, after exclusion of invalid responses.

Summary statistics on the characteristics of participants are provided in Chapter 4.

The content of the surveys is described in detail in Chapter 3.

3 What we talked with customers about

The topics of the engagement are summarised in box **Error! Reference source not found.** and detailed in the remainder of this chapter.

3.1 Topics covered by the customer engagement

Topics covered by the customer engagement
▪ Customer priorities
▪ Rebate changes
▪ Pricing considerations
▪ Pricing options
▪ Wastewater pricing options
▪ Rainwater in the wastewater system

Each topic was addressed using techniques suited to its complexity and materiality. The following table provides a summary of which topics were addressed with which techniques.

3.2 Engagement techniques by topic

	Deliberative forums	Discussion groups	Online survey	In-depth interviews
Customer priorities	✓	✓		✓
Rebate changes	✓	✓		
Pricing considerations	✓	✓		
Water pricing options	✓	✓	✓	✓
Wastewater pricing options	✓	✓	✓	✓
Rainwater in the wastewater system	✓	✓		

Source: CIE/Woolcott

Developing engagement materials

The questions and stimulus material for the research were developed in close consultation with Sydney Water.

CIE and Woolcott developed the forum presentations on each topic, with review and advice from Sydney Water.

The forum presentations, stimuli and keypad polling questions were tested using two pilot forums with Sydney Water staff. Several refinements were made to the materials in response to feedback from these pilot forums; for example:

- Removing some technical complexity from presentations
- Adjusting the time allocated to various sections of the agenda
- Clarifying points of confusion, and
- Revising questions that were perceived as leading.

The survey questionnaire drew on the finalised forum materials for the tariff sections.

Reactions to Phase 1 research

A key starting point for the engagement was to reiterate the findings and outcomes from the Phase 1 research which included reactions to both an overview presentation, and more specifically, the six 'value propositions' that were derived from the first phase of research.

Forums and discussion groups

The forums and discussion groups covered the following topics and questions:

- Do the findings from Phase 1 align with what they remember/what they think?
- Do the six 'values' shown on the slide/handout cover the most important outcomes you want from Sydney Water?
- Is there an important outcome that doesn't fit into these six priorities that is missing?

Further detail on the agendas for the forums and discussion groups is provided in Appendix A and K.

Interviews

The interviews with Customer Council members covered the following questions:

- Do these priorities cover the outcomes that you feel are most important to customers?
- Is there anything missing that you feel is a top priority?

The interviews with significant business customers covered the following topics and questions:

- Thinking about the future in 2030, what would you like to see more of regarding water and wastewater services?
- What would you like to see less of?
- In the future, what do you think would make an ideal water and wastewater service provider?

- What do you think are the critical things that SW should focus on to ensure significant business customers such as your organisation are satisfied?
- Residential and SME customers have mentioned the following as priorities – do you agree with these as being the main priority outcomes?
  - Quality drinking water
  - Fair and affordable pricing
  - Reliable services
  - Water security (ensuring sufficient supply for the future)
  - Responsive customer service
  - Environmental protection

Proposed rebate changes

Sydney Water used the outcomes from the first phase of research to revise its current rebate system. In the second phase of research it was vital for Sydney Water to gauge the reactions of customers to these proposed changes to help assess if the changes reflected phase 1 findings accurately.

Forums, groups and interviews

The forums and discussion groups covered the following issues:

- Reactions to specific proposed revisions to rebates for:
  - Boil water alerts
  - Wastewater overflows
  - Planned and unplanned service interruptions
  - Water pressure failures
  - Discoloured water
- Overall reactions to changes.

Each proposed change was discussed in detail, with feedback on recurring instances and overall reactions assessed.

Further detail on the agenda for the forums, including these polling questions, is provided in appendix A.

Pricing structure & billing

Pricing structure is different across different cities in Australia. Sydney Water wanted to determine the best structure for their customers by looking at the impacts of fixed vs variable charges as well as taking into account any other considerations that may influence the way a bill is structured.

Forums and discussion groups

The forums and group discussions covered the following issues:

- The perceived importance of various factors related to residential billing
- Consideration of various elements that may need to be taken into account in the structure of pricing
- Overall pricing principles.

Participants at deliberative forums and groups were given an interactive quiz to engage respondents and educate them on various elements of the Sydney Water business, costs, impact of socioeconomic status, household size and more.

A spokesperson from each table at the forums was then asked to present their overarching pricing principles to the room.

Water pricing options

In looking at changing the way the water bill is structured, Sydney Water wanted to determine what customers would prefer regarding changes to fixed and variable pricing options. A number of scenarios were provided and their impacts demonstrated through case studies.

Forums, discussion groups and interviews

The forums, discussion groups and interviews covered the following issues:

- Current tariff structure and proposed scenarios of tariff structure options and their impacts on bills
- The ideal proportion of fixed vs. variable costs
- Impacts of different tariff structure options on lower income households (forum and groups only)
- Preferences for gradual or immediate transitions to new pricing structure.

Participants also voted through their keypads regarding the discussed topics at the forums.

The financial hardship and LOTE groups had similar stimulus to the forums.

Different stimulus was provided for small and medium business and significant business customers.

Survey

The survey included a slider question whereby the respondents could choose the preferred balance between fixed and variable charges. They could also see the effect of their selection on varying usage levels and meter sizes.

Wastewater pricing options

Current wastewater pricing offers only a blanket fixed charge to all Sydney Water residential customers. The concept of a variable component was discussed based on a volumetric discharge factor, as well as differences in wastewater charges between houses and apartments.

Forums, discussion groups and interviews

The forums and discussion groups and interviews covered the following issues:

- Adding a variable component to the wastewater service charge
- Options of different charges for houses and apartments regarding fixed costs
- Reactions to proposed scenarios for wastewater pricing
- Participants also voted through their keypads regarding the discussed topics at the forums.

Survey

The residential survey included the same stimulus and questions as above.

The non-residential survey included a slider question whereby the respondents could choose the preferred balance between fixed and variable charges for wastewater. They could also see the effect of their selection on varying meter sizes and discharge factors.

Rainwater in the wastewater system

Sydney Water currently faces problems in their wastewater system caused by rainwater and groundwater entering the system through broken pipes and illegal stormwater connections from private assets (i.e. that do not belong to Sydney Water). Solutions to this problem were given and explored, as well as a discussion around how the work should be funded.

Forums, discussion groups and interviews

The forums, discussion groups and interviews covered the following issues:

- Overall thoughts on the problems faced regarding rainwater in the wastewater system
- Reactions to proposed options to fix/manage the problem
- Who should be paying for the cost of fixing/managing the problem
- Participants also voted through their keypads regarding the discussed topics at the forums.

4 Who we talked with

Approach

Sydney Water defines its customer base as every person and business that comes into contact with its products and services.

- The customer base is large. Sydney Water services around 5 million people across not only Sydney, but parts of the Illawarra region and the Blue Mountains

This project was designed to cater for both the scale and diversity of Sydney Water's customer base. The following groups were targeted for engagement:

- Citizens: anyone who uses Sydney Water's products or services, including:
  - Those who speak a language other than English (LOTE) citizens
  - Financially vulnerable citizens
- Businesses: any business that uses Sydney Water's products or services, including:
  - Small-medium enterprises
  - Large businesses
- Stakeholders, including local community groups and industry groups.

Importantly, citizens and businesses may be property owners that pay Sydney Water bills or they may be tenants who do not directly pay bills.

The techniques used to engage each group are shown in table 4.1.

4.1 Customer segmentation

	Citizens other	Citizens LOTE	Citizens financially vulnerable	Small-medium business	Large business	Customer Council
Deliberative forums	✓	✓	✓			
Discussion groups		✓	✓	✓		
In-depth interviews					✓	✓
Online survey	✓	✓	✓	✓		

Source: CIE and Woolcott

How we recruited participants

Deliberative forums

Participants from Phase 1 of the engagement were invited back for Phase 2. The return rate was 47% overall, but 61% across the 4 locations that were consistent across Phases 1 and 2.

Recruitment for the forums took place up to two-three weeks before each forum. Following recruitment of the Phase 1 attendees, fresh participants were recruited through stratified random sampling from the areas surrounding the forum locations.

Individual quotas were set for each location, for age, gender and LOTE. The quotas for each forum are provided below.

4.2 Recruitment quotas for deliberative forums

	18-44	45-64	65+	Male	Female	LOTE	Non-LOTE
	%	%	%	%	%	%	%
Campbelltown	51	33	16	49	51	35	65
CBD	57	27	16	49	51	33	67
Hornsby	42	36	22	48	52	26	74
Parramatta	54	30	16	50	50	56	44
Hurstville	48	32	20	49	51	46	54
Penrith	49	34	17	49	51	14	86
Wollongong	44	33	23	49	51	14	86
Total	**51**	**31**	**18**	**49**	**51**	**37**	**63**

Source: CIE/Woolcott

For the fresh recruitment, people were telephoned at random (primarily through fixed line, but some mobile) and asked for their interest in attending, then those interested completed a short screening questionnaire. For quotas where there were lower responses, some participants were also recruited though market research recruiters and Facebook. Those with personal or professional connections to Sydney Water were screened out; i.e. if they or any immediate members of their family, worked for Sydney Water, any other water or wastewater utility company, for IPART or in a water quality related role with NSW Health or NSW Environment Protection Authority.

Confirmation telephone calls were made in the week leading up to each forum and followed up by email. Over a hundred participants were recruited for each forum.

All participants received $100 for their participation, to cover any out-of-pocket expenses, and were provided with a light dinner and dessert.

Discussion groups

All participants for the discussion groups were bill payers (either wholly or partially). Again, those from Phase 1 were invited back for Phase 2.

The LOTE discussion groups were recruited by Cultural and Indigenous Research Australia (CIRCA). The groups consisted of people who did not speak English or did not speak it well and a mix of ages and genders. Again, those from Phase 1 were invited back for the Arabic and Mandarin groups (the other LOTE groups were not conducted in Phase 1). CIRCA bilingual consultants recruited the participants, who were contacted through individual phone calls by the consultant.

All residential participants (LOTE and financial hardship groups) received $80 with the SMEs receiving $125, to cover any out-of-pocket expenses.

The financial hardship and SME groups were recruited through a market research recruiter, Alta Research, who specialises in recruitment for such discussion groups. Phase 1 respondents were also invited back.

All SME participants were water and wastewater decision makers who had a role in interacting with Sydney Water either if there was a water interruption or wastewater overflow or by paying water bills. Small and medium businesses were defined as those with 0-199 employees that did not operate out of home but had a designated premises. As with the forum recruitment, those with personal or professional connections to Sydney Water were screened out. It was ensured that a good mix of businesses in terms of industry were included.

For the financial hardship groups, the definition was that they held a concession/low income healthcare card and had difficulty paying utility bills in the last 12 months (i.e. requested an extension). Again, those who had a personal or professional connection with Sydney Water were screened out, i.e. if they or any immediate members of their family, worked for Sydney Water, any other water or wastewater utility company, for IPART or in a water quality related role with NSW Health or NSW Environment Protection Authority. There were a mix of genders and ages included and over half in each group were owners of their properties (either outright or with a mortgage).

Survey

Panel members for the online research were recruited through Lightspeed Research. The quotas for the citizens version of the survey are provided below. Respondents were provided incentives through the panel's points system, which are likely to equate to between $1.50 and $2.50 per respondent.

4.3 Recruitment quotas for survey

Category	Quota
Age	
18-39	44%
45-59	33%
60+	23%
Gender	
Male	49%
Female	51%
LOTE	
LOTE	36%
Non-LOTE	64%
Location	
Sydney - Illawarra	6%
Sydney - Baulkham Hills and Hawkesbury	5%
Sydney - Blacktown	7%
Sydney - City and Inner South	7%
Sydney - Eastern Suburbs	6%
Sydney - Inner South West	12%
Sydney - Inner West	6%
Sydney - North Sydney and Hornsby	9%
Sydney - Northern Beaches	5%
Sydney - Outer South West	5%
Sydney - Outer West and Blue Mountains	6%
Sydney - Parramatta	9%
Sydney - Ryde	4%
Sydney - South West	8%
Sydney - Sutherland	5%
Business size[a]	
Sole trader	58.4%
1-19 employees	39.3%
20-199 employees	2.3%

[a] Applies only to recruitment of businesses

Source: CIE/Woolcott

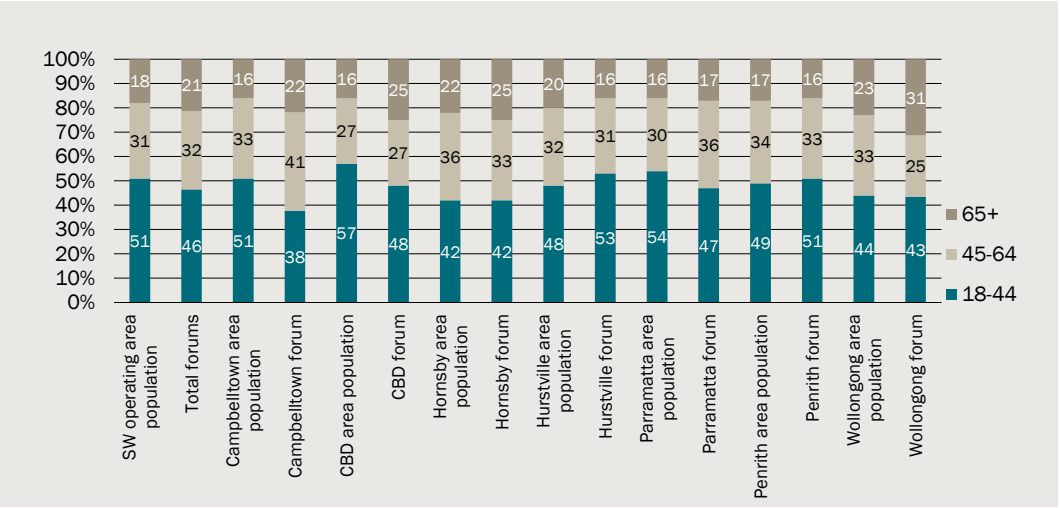
Representative sample

The sections below outline the demographics of the actual participants in the engagement program as well as the actual demographics of the population.

Deliberative forums

The age of attendees at the forums is presented in Figure 4.4. There was a good spread of ages represented across the different locations.

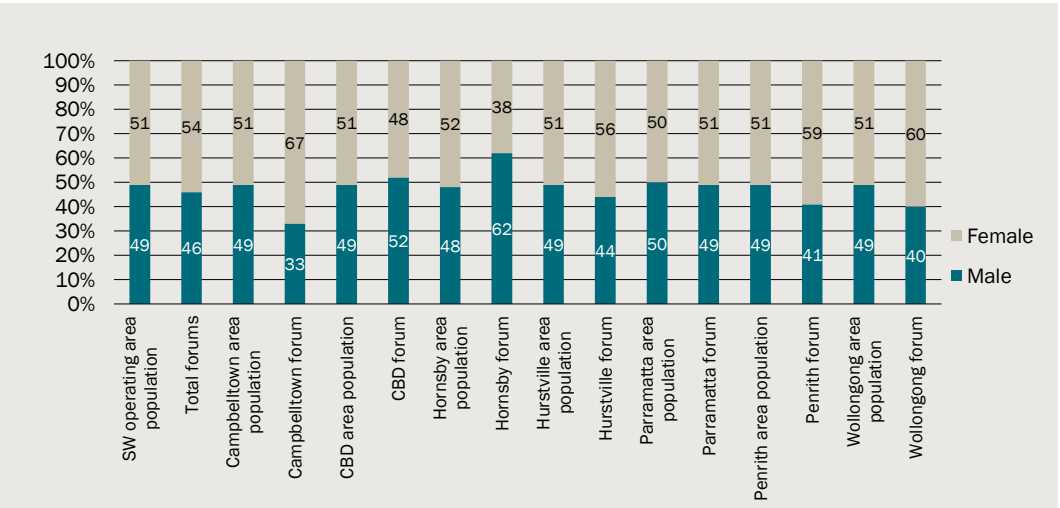
4.4 Age of forum participants and population by location



Base: Total forums (n=529); Campbelltown forum (n=79); CBD forum (n=79); Hornsby forum (n=69); Hurstville forum (n=75); Parramatta forum (n=78); Penrith forum (n=82); Wollongong forum (n=67), unweighted

Overall, gender representation was roughly representative across the forums (54% females compared to 51% of the population and 46% males compared to 49% of the population).

4.5 Gender of forum participants by location

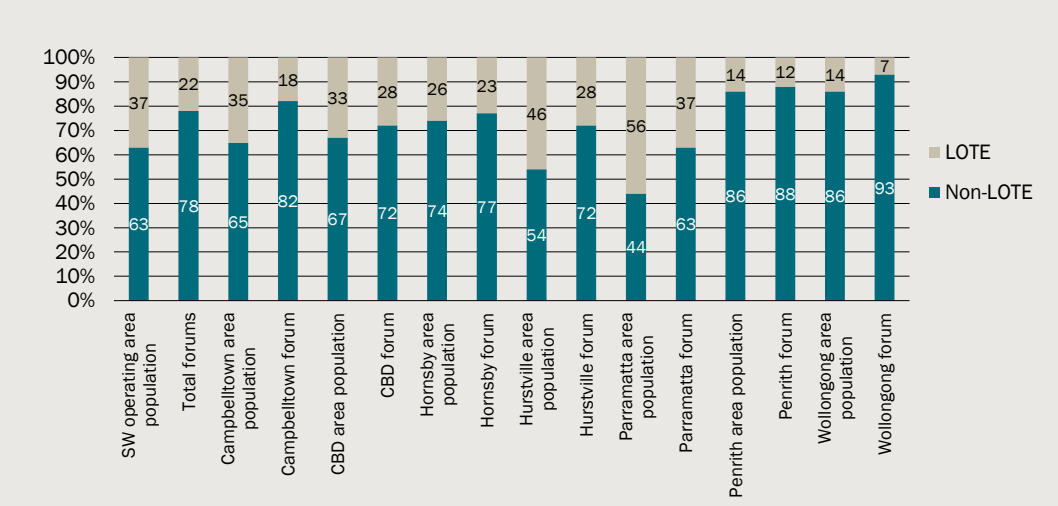


Base: Total forums (n=529); Campbelltown forum (n=79); CBD forum (n=79); Hornsby forum (n=69); Hurstville forum (n=75); Parramatta forum (n=78); Penrith forum (n=82); Wollongong forum (n=67), unweighted

As in Phase 1, the proportion of LOTE representation was slightly lower than that required across all forums. This is to be expected since forums conducted in English are typically attended by those who speak English well. The inclusion of in-language groups

was used to ensure further LOTE representation and this variable was also weighted during data analysis of the forum keypad results.

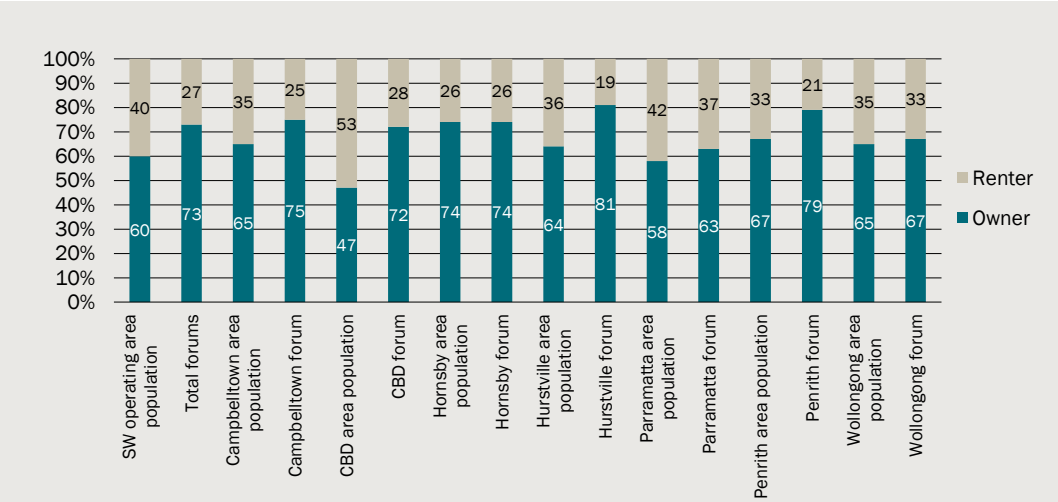
4.6 LOTE forum participants by location



LOTE (Language other than English)
Base: Total forums (n=529); Campbelltown forum (n=79); CBD forum (n=79); Hornsby forum (n=69); Hurstville forum (n=75); Parramatta forum (n=78); Penrith forum (n=82); Wollongong forum (n=67), unweighted

There was good representation of home ownership across the locations.

4.7 Home ownership amount forum participants by location



Base: Total forums (n=529); Campbelltown forum (n=79); CBD forum (n=79); Hornsby forum (n=69); Hurstville forum (n=75); Parramatta forum (n=78); Penrith forum (n=82); Wollongong forum (n=67), unweighted

Seventy per cent (70%) of the forum participants received bills directly from Sydney Water, 21% paid indirectly through their landlord and 9% did not directly pay for water and wastewater.

The forum data was also weighted by the seven regions to ensure a representative sample across the Sydney Water area for the total results.

Online survey

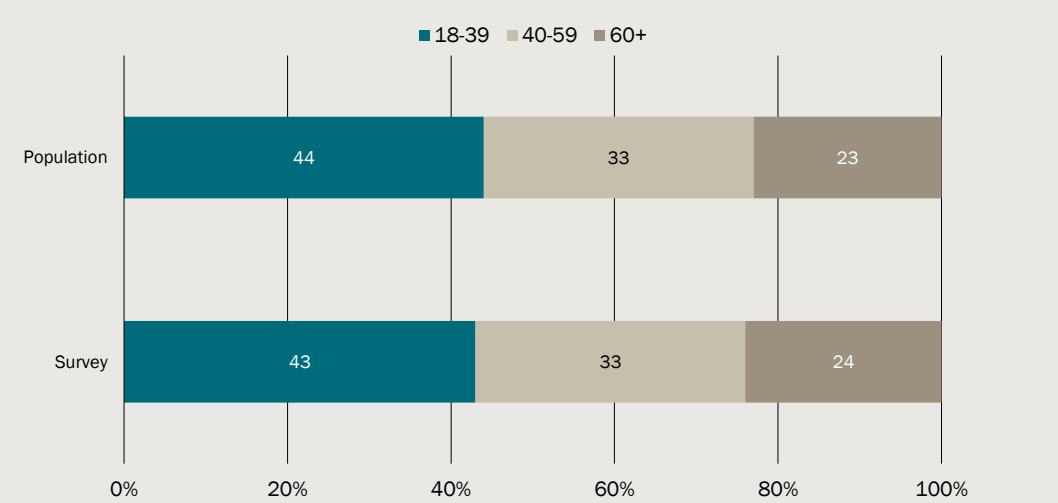
Citizens

The citizens component of the survey was completed by 1003 bill paying respondents (either whole or partial bill payers). Please note that the actual demographics below are based on the whole population not just bill payers.

The sample was broadly representative of citizens in Sydney Water's area of operations in terms of age, gender and location. Data was weighted by LOTE during analysis to ensure accurate representation.

The ages of the survey respondents was virtually identical to the proportions in the Sydney Water population – 43% were aged 18-39, 33% aged 40-59 and 24% were 60 years of age or older.

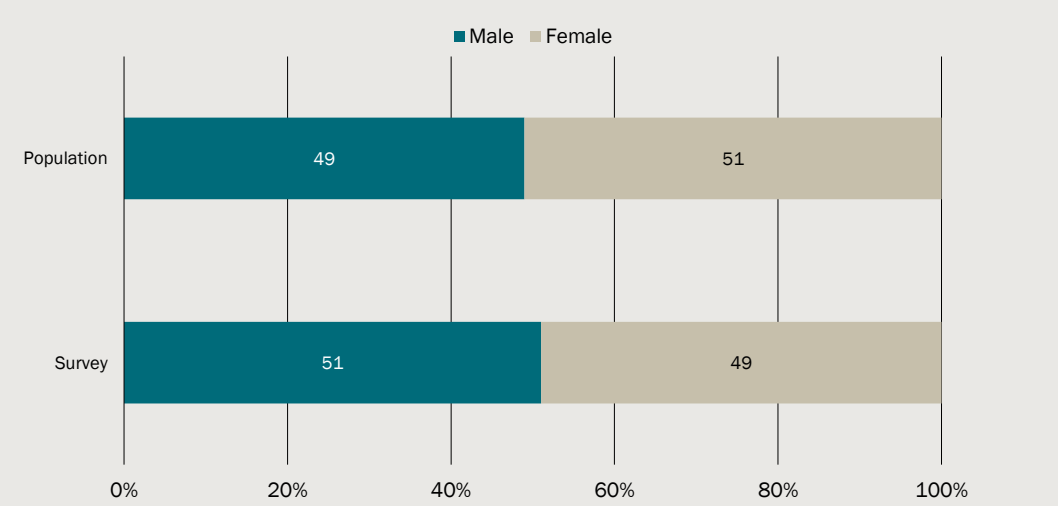
4.8 Citizen survey respondents by age



Base: All respondents (n=1003), unweighted

Gender was closely representative to the population with 49% female and 51% male.

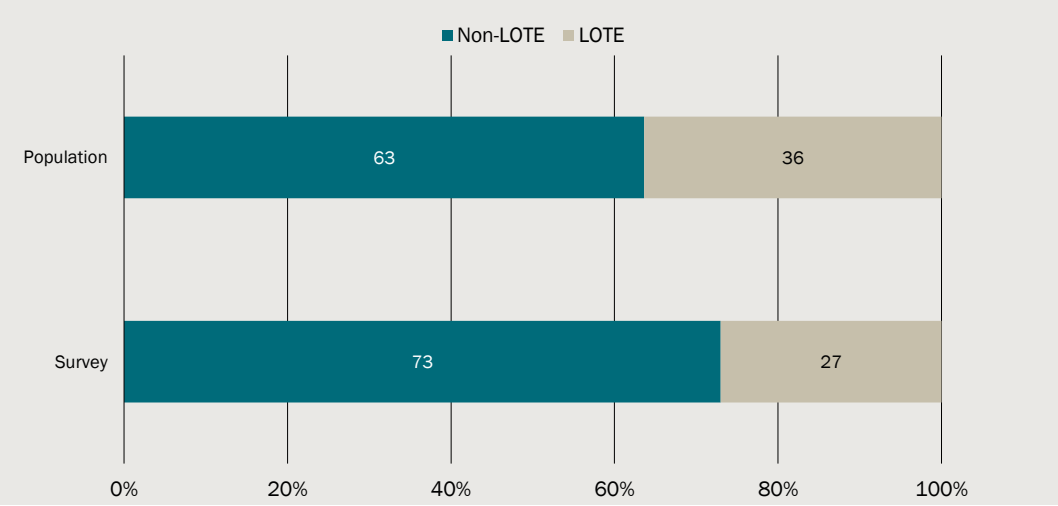
4.9 Citizen survey respondents by gender



Base: All respondents (n=1003), unweighted

Twenty seven per cent (27%) of the survey respondents spoke a language other than English at home (LOTE) compared to 36% of the population. This variable was weighted during the analysis to be representative.

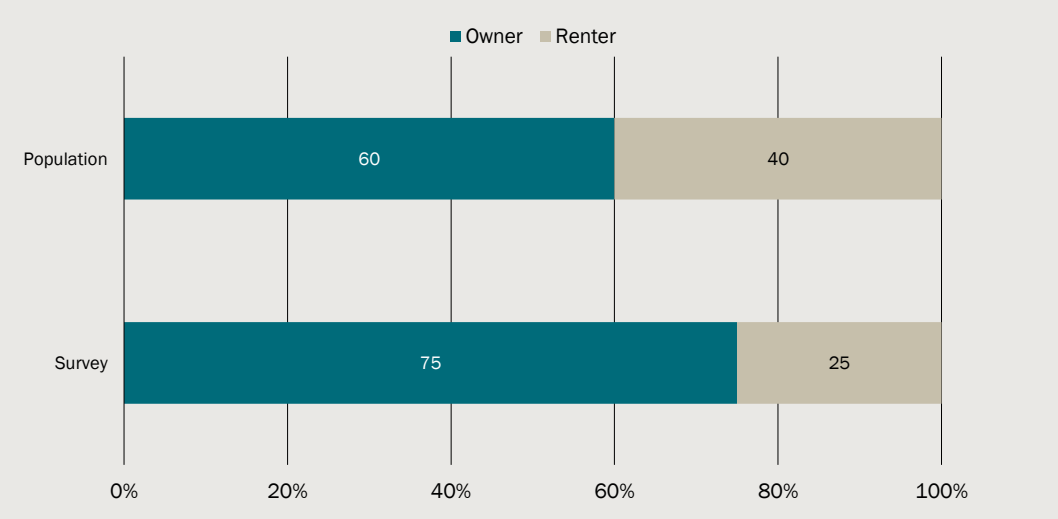
4.10 Citizen survey respondents by LOTE



LOTE (Language other than English)
Base All respondents (n=1003), unweighted

Seventy five per cent of the survey respondents were home owners and 25% were renters. This is skewed towards home owners due to the specification that all respondents were to be bill payers (either wholly or partially).

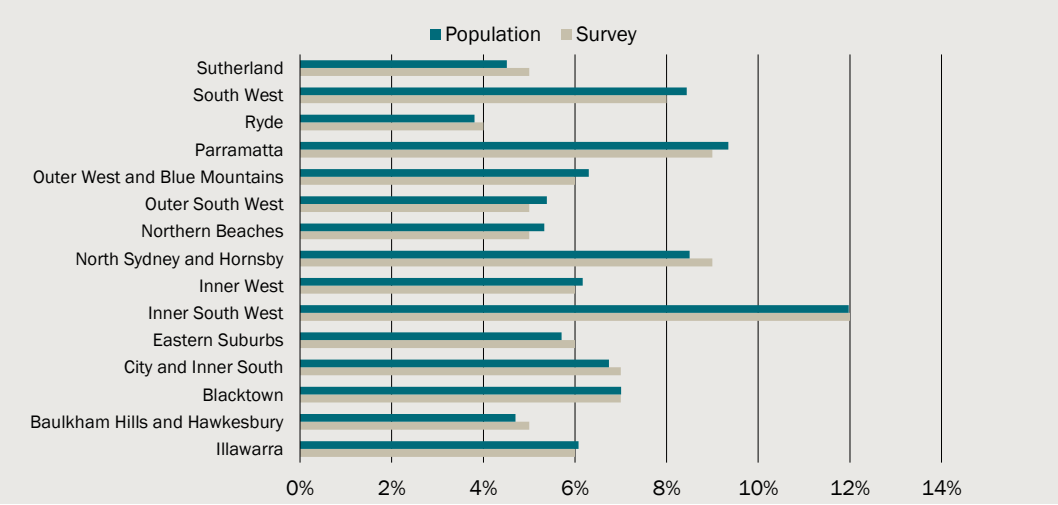
4.11 Citizen survey respondents by home ownership



Base All respondents (n=1003), unweighted

The survey sample was representative in terms of location with the greatest proportion coming from the Inner South West.

4.12 Citizen survey respondents by location

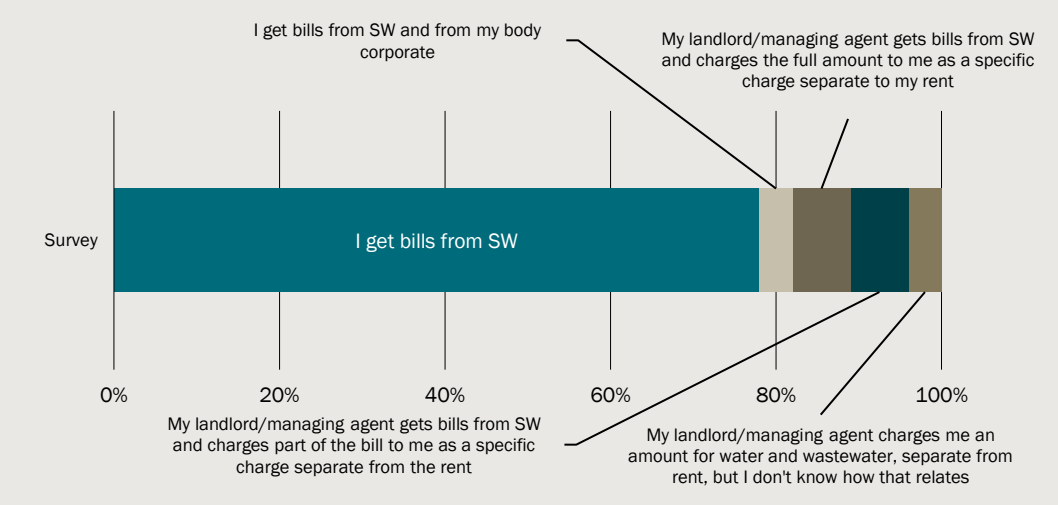


Data source: CIE/Woolcott

The sample was also representative in terms of ATSI with 2% of the sample being of Aboriginal and Torres Strait Islander origin (compared to 1.5% in the Greater Sydney area).

Most of the respondents received a bill directly from Sydney Water (78%), the remainder paid through their landlord or managing agent, either in full or a portion.

4.13 Citizen survey respondents by billing arrangement



Which of the following best describes the water and wastewater bills you receive for your business?

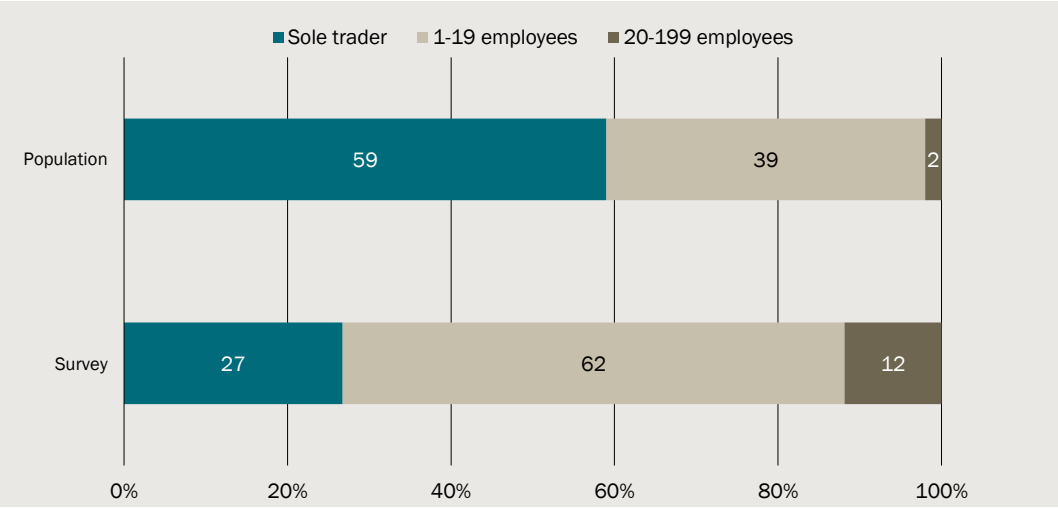
Base: All respondents (n=1003), unweighted

Small-medium businesses

The business component of the survey was completed by a sample of 250 small-medium businesses. The sample was a mix of businesses in Sydney Water's area of operations in terms of employment size and location.

Businesses mainly represented small businesses (sole traders and 1-19 employees) with a small number of medium sized businesses of 20-199 employees. This variable was weighted to be representative during the analysis.

4.14 Business survey respondents by employment size

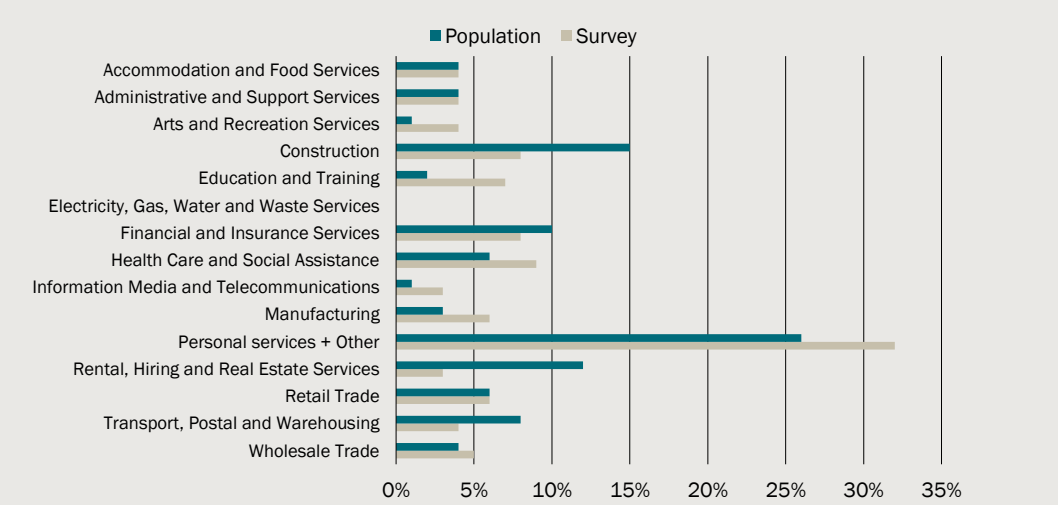


How many employees do you have in your business (full time equivalents other than the proprietor)?

Base: All respondents (n=250), unweighted

A broad range of industries were represented in the sample (see figure 4.15). Businesses in the construction industry were underrepresented relative to the underlying population, while businesses in the 'Personal services' or 'Other' categories were overrepresented.

4.15 Business survey respondents by industry



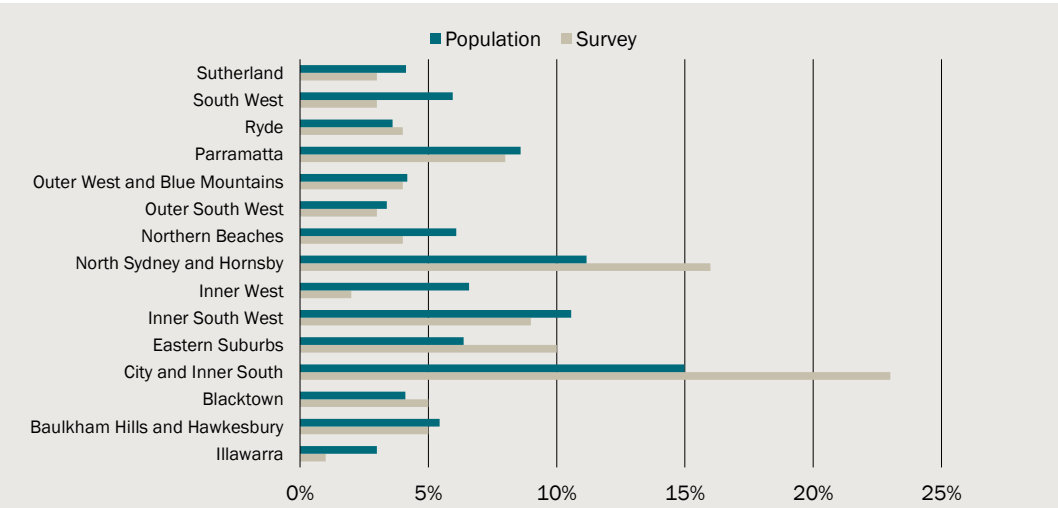
What industry does your business operate within?

Population data from ABS Cat. No. 8165, with ANZSIC industry classification corresponding to survey categories one-for-one, apart from 'Personal services + Other', which includes ANZSIC industries "Other services", "Administrative and support services", "Agriculture, forestry and fishing", "Currently unknown", and "Professional, scientific and technical services"

Base: All respondents (n=250), unweighted

The businesses surveyed were a good cross section across the Sydney Water area, with most being located in the City and Inner West.

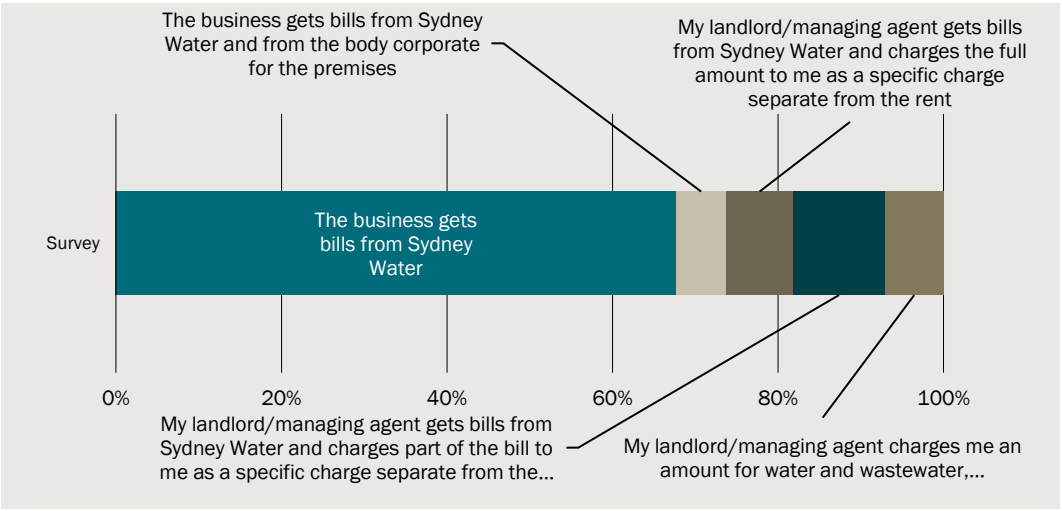
4.16 Business survey respondents by location



Data source: CIE/Woolcott

Over two thirds of businesses indicated that they receive bills from Sydney Water, 11% stated that they are charged a portion of the bill with 8% stating that they get charged the full amount from the managing agent.

4.17 Business survey respondents by billing arrangement



Which of the following best describes the water and wastewater bills you receive for your business?

Base: All respondents (n=250), unweighted

5 Results: Reactions to findings from Phase 1

5.1 Key findings – reactions to Phase 1 research

Reactions to Phase 1 research
Participants felt that the findings from Phase 1 reflected their views;
▪ In particular, they supported the six 'customer priorities' identified from Phase 1 – 55% at the forums stated that the priorities fully reflected their views with a further 39% reporting that they partially reflected their views;
▪ Residents in the forums and groups agreed that quality drinking water, fair and affordable pricing and reliable services were the most important priorities;
▪ They thought that environmental protection should be focussed on above responsive customer service (particularly at the current time of drought) and that water security should continue to be a priority at this time.
▪ Education/increasing awareness was identified as a potentially missing priority (although this could be incorporated into some of the other priorities i.e. increasing awareness about what Sydney Water is doing in relation to water security and environmental protection in particular).
▪ A reliable service was particularly important to small and medium business customers.
▪ Pricing was key to significant business participants and they also requested good communication and a greater level of support and understanding by Sydney Water, particularly around testing and quality issues.

Source: CIE/Woolcott

Forums

At the commencement of each forum, Sydney Water gave an overview of the engagement process and recapped some of the findings from Phase 1 conducted in February and March of 2018. Participants were asked to discuss their overall reactions to the research findings as well as to assess the customer priorities presented that were identified during Phase 1.

Overall reactions

There was overall agreement that Sydney Water had taken the time to understand, assess and act on responses from Phase 1 of their research. Participants who had attended the first round of forums recalled the topics discussed and felt that they had been listened to and their responses considered.

Some of those participants recalled the extensive discussions they had had at their tables over numerous issues and thought that Sydney Water had summarised them well and had moved in the best possible direction.

"It all looks pretty comprehensive – it seems to reflect what I remember speaking about at the last forum" - Hornsby

Some participants felt that the issue regarding renters not receiving rebates should be prioritised, however there was a general understanding that legislative issues were involved that were perhaps out of Sydney Water's jurisdiction.

"It's nice to see that there's a follow up and that our opinions have been considered." - Penrith

Reactions to priorities

Forum participants were presented with the top six customer priorities or outcomes that customers reported were important to them in the Phase 1 engagement (refer to handout 1 in Appendix C). Overall, reactions to the six priorities were positive, with many indicating that they felt them to be comprehensive enough to cover most of the important outcomes they wanted from Sydney Water.

Water quality was perceived to be one of the most important priorities, as was having a reliable service, and having fair and affordable pricing for all. These three outcomes were thought to be a 'given' and should continue to be the underlying priorities for Sydney Water.

It was suggested that 'responsive customer service', while identified as an important outcome, was potentially the least important of the six, and could be moved 'down' to accommodate more important priorities such as 'environmental protection'. It was reasoned that responsive customer service was only required if a customer had to contact Sydney Water about a problem, and that this rarely happened.

Water security and environmental protection were the most commonly discussed priorities during this session, especially given the current drought across NSW. The emphasis on these two outcomes demonstrated participants' sentiment towards the ongoing supply of water for future generations, helping those in need, and the effects of climate change. Many participants were curious about what Sydney Water was actually doing in relation to these two priorities and believed that greater focus should be put on these priorities.

"Environmental should be moved forward! They need to educate people as well as plan and encourage behaviour." - CBD

When participants were asked if they felt that anything was missing from the proposed priorities, many felt that most things had been covered. There were some suggestions, however, particularly around increasing awareness about what Sydney Water does and its investments, and also education about issues relating to water such as using water wisely, greywater use and recycled water. There were many questions about what Sydney Water is doing in relation to some of these priorities, e.g. environmental protection and water security in particular.

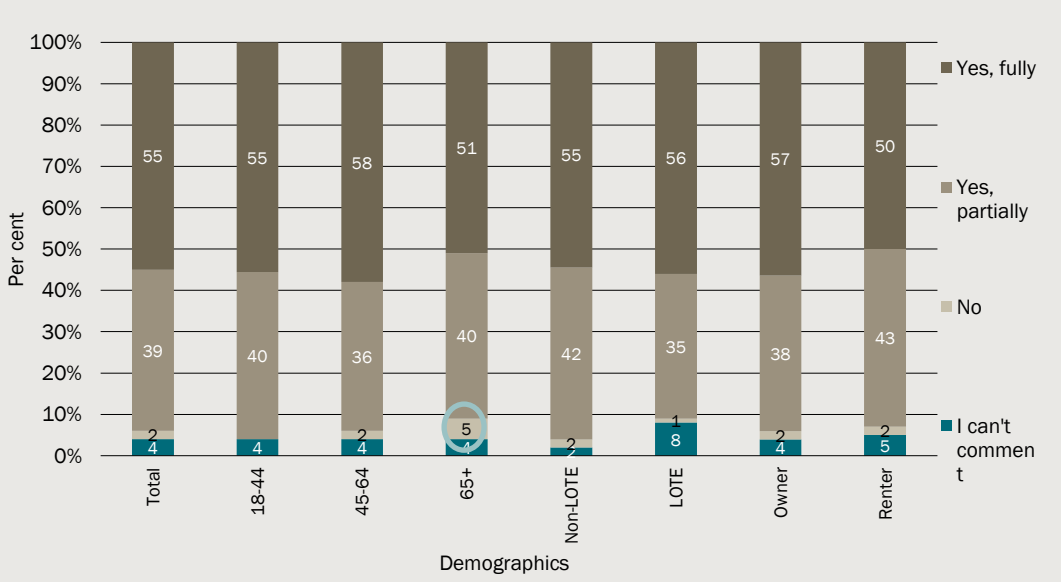
There were also some suggestions about protecting water from terrorism, which stemmed from the clarification that 'water security' did not incorporate this, but was rather ensuring there is enough water for the future.

After the table discussions, participants were then asked to vote on the extent to which the customer priorities reflected their own views (see Figure 5.2). More than half (55%) of all forum participants indicated that the six customer priorities presented by Sydney Water were 'fully' reflective of their views, with a further 39% indicating they were 'partially' reflective. As discussed above, partially reflective tended to signify that participants thought that environmental protection should be moved up and customer service perhaps moved down.

'Full' support was significantly higher at the Hornsby forum (71%), yet significantly lower at the CBD forum (only 40% compared to 50% indicating 'partial' support). Hornsby was the first forum in the series and as the forums progressed there was more media attention on the continuing drought, which could have affected opinions on the importance of water security as a priority.

Forum participants aged 65 years and older were significantly more likely to indicate that the six customer priorities were not reflective of their views (5%), however this was a small minority.

5.2 Extent to which customer priorities reflect participant views



Do the customer priorities summarised in the presentation from the last forums reflect your views?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Discussion groups

Participants in all groups agreed that the six customer priorities as listed by Sydney Water covered the outcomes they feel are important to them. Most participants believed that quality drinking water should be the highest priority with reliability and affordability being next in importance. Similar to the forums, the financial hardship groups believed that environmental protection could be moved up in importance and that water security should be focussed on at this time. They suggested that there should be a focus on using more greywater and water recycling, particularly in this time of drought.

When asked if there were other priorities that were important, participants in the Hindi and Mandarin speaking groups believed that Sydney Water could improve their communication with the public and reported this as a top priority. This would include creating awareness about the services Sydney Water offers and the type of organisation Sydney Water is – for example, one participant thought Sydney Water is a government agency, and another thought that it is a corporate organisation. Another participant wanted Sydney Water to address topical issues as they arise, for example, what they are doing to address the issues related to the current drought.

Pipe maintenance was considered a top priority for participants in the Greek, Cantonese and Mandarin speaking groups.

"Maintenance is very important. The pipes are old and they need maintenance periodically. It would cause a lot of wastage of water if pipes were broken". Mandarin speaking participant

The small and medium business customers agreed with the customer priorities and did not believe there was anything missing. Reliability was seen to be particularly important for businesses as water interruptions cause significant impacts on these customers.

In-depth interviews

The Customer Council participants agreed with the priorities identified by customers during Phase 1. In particular they believed that quality drinking water should be the highest priority with fair and affordable pricing being next in importance, to ensure that even those on lower incomes can access water. They were also happy to see environmental protection in the list of priorities.

"Access to clean drinking water is a basic human right so quality should be number 1". Customer Council representative

The significant business customers' priorities were mainly around:

- Sydney Water being more understanding and flexible about pollutant discharge levels into the system (understanding that although levels are at a particular limit now, the levels might need to increase again in the future so they can't keep "screwing them down").

- Upgrading the wastewater system so it can cope with effluent discharge – it was reported that it seems to be inconsistent across locations currently.
- Providing better technical assistance and support for testing and quality issues relating to discharge from large businesses into the trade waste system e.g. high ammonia levels. It was reported that in other states this is already being provided by the water service provider.
- Consistency in the levels of chemicals that Sydney Water put into the water supply system.
- Communication – prior notification around water interruptions so they can make alternative arrangements, e.g. shut down non-critical systems.
- Pricing was also a key priority for all large customer participants.

When presented with the priorities from residents they agreed that these six outcomes seemed to cover the main factors that Sydney Water should focus on.

They were all very positive about Sydney Water's Business Relationship Managers and appreciated the individual contact they have with these personnel.

6 Results: Proposed rebate changes

6.1 Key findings – proposed rebate changes

Proposed rebate changes
▪ Overall the proposed changes to rebates were well received in all components of the engagement - 94% at the forums supporting the changes either strongly or slightly
▪ There was support for all the individual rebate changes with consistent support across the demographic groups – in some cases the older age groups supported the changes more strongly
▪ Although still supportive overall (45% strongly supported and 31% slightly supported at the forums), there were some concerns about the rebate changes for water pressure failures as for a single event it was proposed that it be reduced to nil. With a longer water pressure failure that could impact people's daily routines it was believed that a rebate was appropriate
▪ LOTE participants were supportive of the changes to rebates overall and rather were concerned about the potential impacts of these types of events on those who do not speak English as their first language. Communication was seen to be important to these customers, ideally in their first language
▪ Small and medium business participants believed that the rebates were not large enough for those significantly affected by these events. They suggested that all should be linked to meter size rather than just the rebates that reflect the annual water service charges.

Source: CIE/Woolcott

Forums

Sydney Water presented the results from a token exercise conducted in Phase 1 of the research, which indicated the relative importance placed on receiving rebates for various incidents. They were also shown how Sydney Water proposed to implement the findings of this engagement through changing the current rebate structure. Each participant also received this information in the form of a hand out (see handouts 2a and 2b in Appendices E and F).

Reactions to revisions

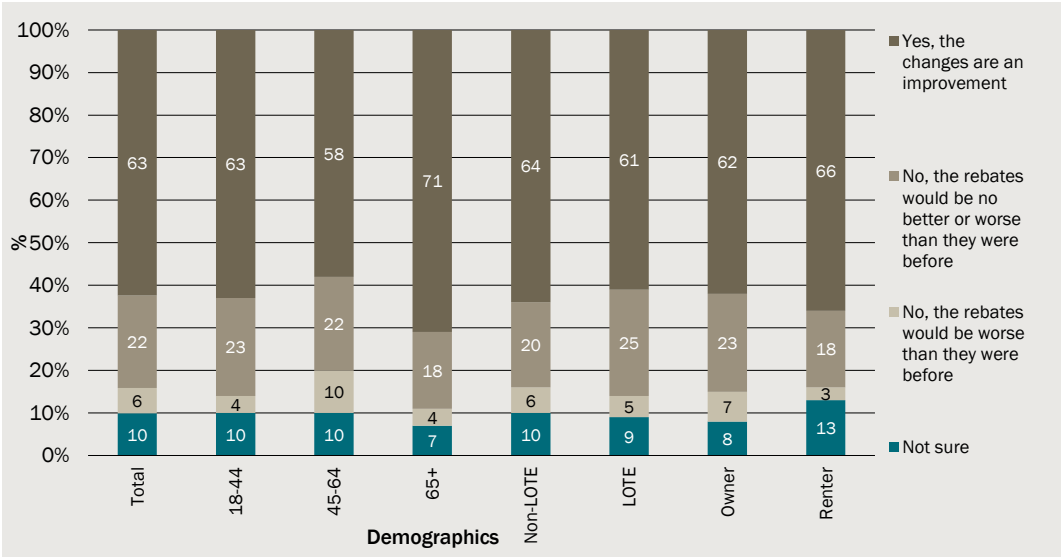
Participants at the forums were generally happy with the proposed changes to rebates put forward, noting that Sydney Water were attempting to reflect the results from the token exercise conducted in the first phase. A further breakdown of reactions to each proposed change is outlined below.

At the end of the forum table discussions on rebates, participants were asked to vote on whether they saw the changes as an improvement (see Figure 6.2) or not. Nearly two thirds (63%) indicated that the proposed changes were an improvement, which was significantly higher at the Parramatta forum (75%), yet significantly lower at the Hurstville forum (50%). Around one in five (22%) thought the rebate changes were no

better or worse than they were before and this was particularly the case at the Hurstville forum (33%).

Only 6% of forum participants indicated that they felt the proposed rebate changes, overall, to be worse than they were before. This was significantly higher for those voting at the Hornsby forum (13%) but still a minority overall. There were no significant differences by age, LOTE or housing situation.

6.2 Extent to which forum participants saw the proposed rebate changes as improvement



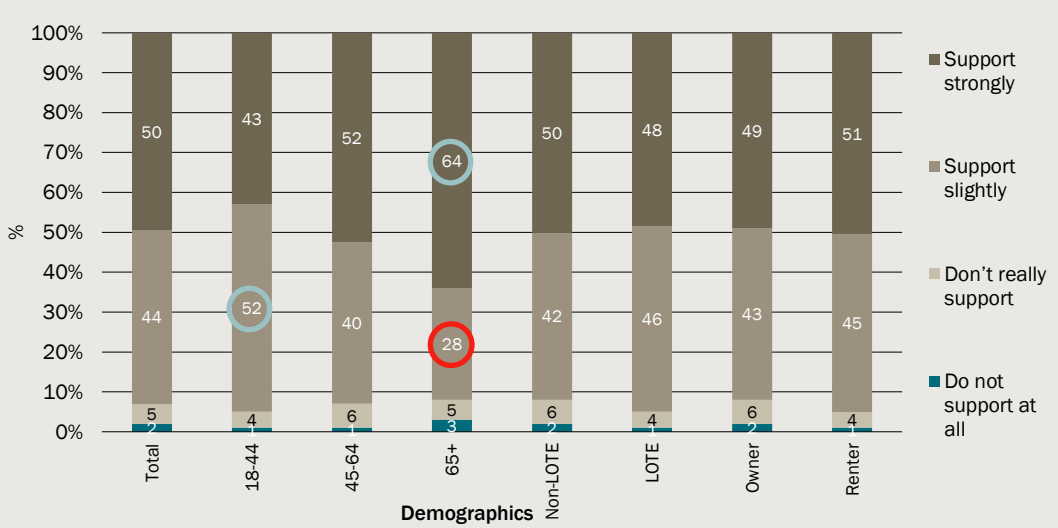
Overall, do you think the proposed changes are an improvement on the previous set of rebates?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Following this, participants were also asked to indicate their level of support for the proposed changes overall (see Figure 6.3). Half of all forum participants 'strongly' supported the changes overall, with a further 44% indicating that they supported the changes 'slightly'. Participants at the Hurstville forum were significantly more likely to support the changes 'slightly' (60%) than 'strongly' (36%), while participants at the Hornsby forum were significantly more likely to 'not really' support or 'not' support the changes (16% and 6% respectively).

Further analysis also shows that overall support for the rebate changes showed some variation by age. Those aged 65 years and over were significantly more likely to 'strongly' support the changes (64%), while those aged 18-44 years were significantly more likely to 'slightly' support the changes (52%).

6.3 Support for the proposed rebate change: overall support



To what extent do you support the changes to the rebates as an overall package?

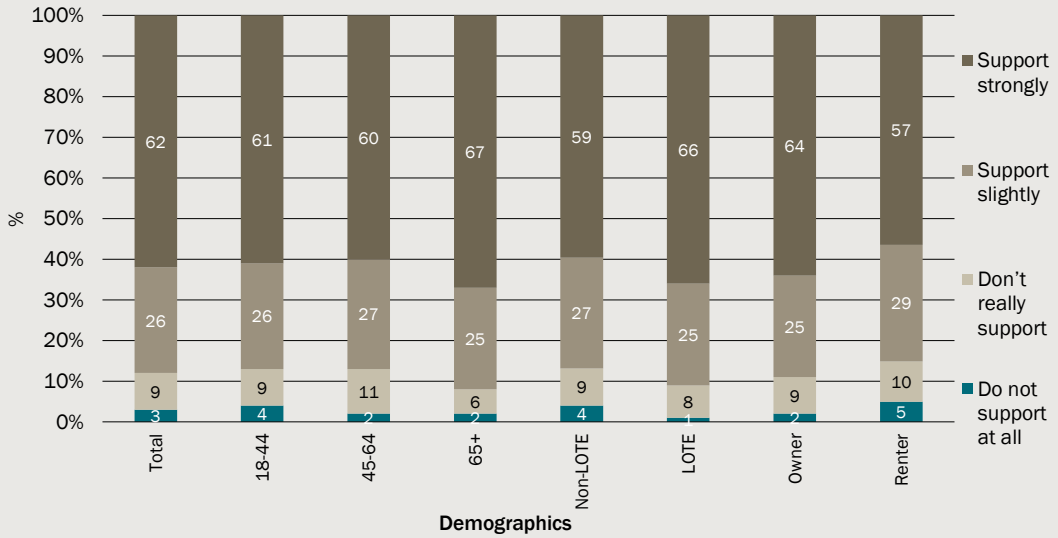
Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Boil water alert

The results from the first phase token exercise identified the boil water alert as the most important rebate incident. In order to reflect this, Sydney water is proposing to increase the rebate amount for a boil water alert from $35 to $50. The support for this change was strong amongst participants at the forums with many citing the reason being that it was an important health risk, and that the rebate would help them recoup associated costs such as purchasing bottled water or the impact on their electricity bill. There was also an understanding that it would be impractical for this amount to increased further because of the large financial repercussions it could have on Sydney Water (depending on the catchment area affected). It was also noted that a boil water alert was not necessarily a fault of Sydney Water's directly and therefore it was more a courtesy for them to be giving a rebate for this at all.

Following table discussions, participants were asked to vote on whether they supported the changes to the rebate for a boil water alert (see Figure 6.4). Overall, three in five participants (62%) indicated that they 'strongly' supported the proposed changes for this event, with a further 26% 'slightly' supporting them. This support was mirrored across all age groups, LOTE and non-LOTE, as well as owners and renters.

6.4 Support for the proposed rebate change: boil water alert



In the context of the overall package do you support the changes to the rebates for 'boil water alerts'?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Wastewater overflow

While results from the first phase token exercise indicated that wastewater overflows were the second highest priority regarding rebate levels, the number of tokens attributed to wastewater incidences was lower than the current rebate offered by Sydney Water. There were also differences in rebate level expected for repeat incidences. As a result, Sydney Water proposed changes to their current level of rebates.

In the event of one wastewater overflow it is proposed that Sydney water increase the rebate amount from $60 to $75. This was well received by forum participants who agreed that wastewater overflow occurrences would be highly inconvenient. Some participants even felt that this increased amount was 'too generous' and perhaps could be revised based on the location of the overflow (i.e. an outdoor overflow receiving a lower rebate than an indoor overflow). It was believed that an indoor event resulted in substantially more inconvenience than an outdoor event that was situated away from the house.

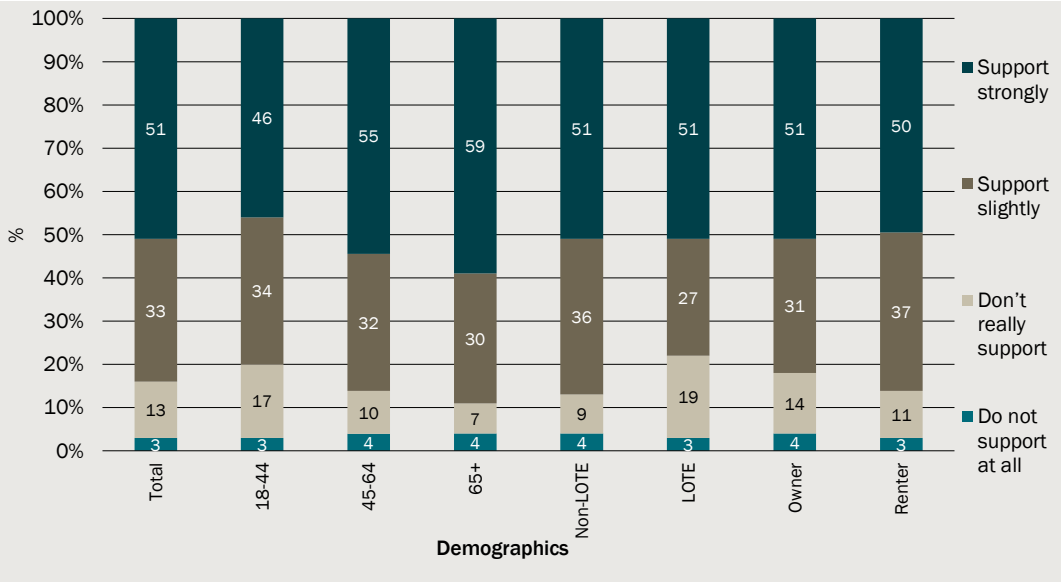
In the incidence of a second wastewater overflow, Sydney Water proposed that instead of receiving the total annual wastewater service charge back (approx. $600 for residential and most small business customers), that customers would receive a reduced amount of an additional $150 for the second incident. The proposed changes suggested that the annual wastewater service charge refund only be given upon the third incidence. Again, generally participants supported the proposed staged change however for some, it was felt that a second wastewater overflow incident was 'too much' (i.e. that Sydney Water had not properly fixed the problem the first time) and that the annual wastewater service charge should be kept as the rebate for the second occurrence. A minority even

mentioned that this change didn't seem to reflect the values that were discussed earlier in the forum.

> *"The second event [rebate] seems like a bit of a copout. It goes against the values of quality service to reduce the amount for second event – that's not quality." - Penrith*

Forum participants were asked to vote on their support for the changes to wastewater overflow rebates (see Figure 6.5). Just over half of all forum participants (51%) 'strongly' supported the changes, with a further third (33%) 'slightly' supporting them. While there were no significant differences across age groups, LOTE and non-LOTE, nor owners and renters, participants at both the Hornsby and Hurstville forums were significantly less likely to indicate 'strong' support for these changes. Instead, Hornsby participants saw a minor increase in slight support, and were also significantly more likely to not support the changes at all (9%), while Hurstville participants were significantly more likely to indicate they 'didn't really support' the changes (28% compared to 13% overall). Conversely, Parramatta participants were significantly more likely to 'strongly' support the changes (67%).

6.5 Support for the proposed rebate change: wastewater overflows



In the context of the overall package do you support the changes to the rebates for 'wastewater overflows'?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Interruptions to service

The token exercise from the first phase of forums indicated that participants felt different water service interruptions should receive varying rebate amounts depending on whether or not notice was given. As it stands, Sydney Water currently pays an equal amount to interruptions of more than 5 hours with or without notice. In order to reflect this

sentiment, Sydney Water proposed a decrease in the rebate amount for service interruptions with notice, and an increase in the amount for interruptions with no notice.

Most participants agreed that the changes to these rebates were positive and reflected the research that had previously been conducted in Phase 1. There were some who even felt that a rebate for a planned interruption was unnecessary as they deemed that maintenance work was inevitable and in fact necessary for any service, and that with proper notice residents would be able to prepare adequately for this event. Some, however, noted that an interruption of over 5 hours was significant and therefore they wanted to see the rebate remain.

"It's fair. If they give you a heads-up, then why worry because you can plan around it." - Hurstville

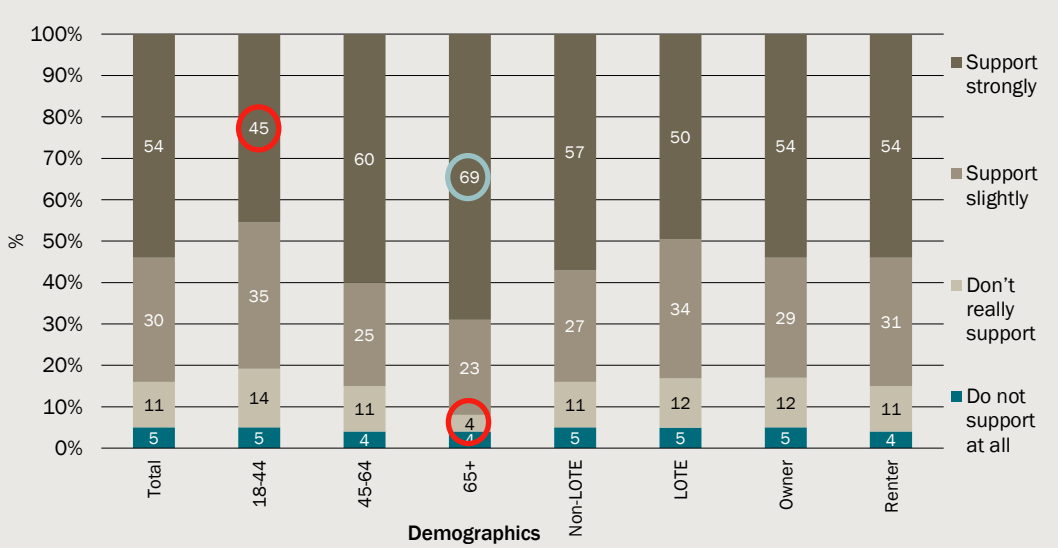
"If there's a fair warning beforehand, then a rebate isn't even needed because you can plan around it." - Campbelltown

Some participants also felt that an increase of $5 to the unplanned interruption of more than 5 hours was not a big enough increase. There were a number of participants who called for interruptions of this type to be rebated on a more intricate level, taking into account time-of-day, and the length of interruption. So, while many agreed with the increase in principle, it was felt that this amount could perhaps better reflect the service outage.

There was no proposed change to the rebate for 3 or more interruptions without notice of over an hour in one year which is currently based on the service charge (approx. $80 for residential and most small business customers). Generally, participants were happy with this rebate, however as noted above, were worried about the length of the interruptions that had no notice and felt this amount may need to be adjusted if it went over a certain 'capped' length.

Forum participants were then asked to vote on their support for the changes to the service interruption rebates. Figure 6.6 shows the support for changes to planned service interruptions, with more than half (54%) indicating they 'strongly' supported the changes, and a further 30% showing 'slight' support. While there were no significant differences in support across the forum locations, there were some indicated by age. Older participants were much more forgiving, showing a significantly higher level of support for the proposed changes to planned service outage rebates (69% indicating they supported strongly), while those aged 18-44 years were significantly less likely to show strong support (45%) – the other two age groups showed minor changes in their level of support.

6.6 Support for the proposed rebate change: planned interruptions



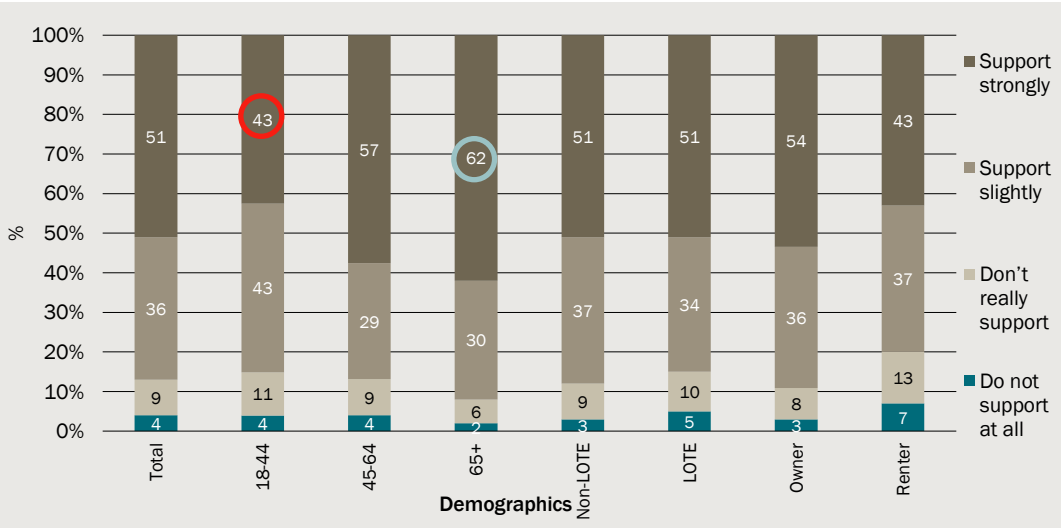
In the context of the overall package do you support the changes to the rebates for 'planned interruptions'?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

It was also asked that forum participants vote on their support for the proposed changes to unplanned service interruption rebates (see Figure 6.7). Again, support was strong (87% total support for the changes), with some significant differences seen between age groups with older participants being more likely to support the changes (92% total support).

Participants at the Parramatta forum were significantly more likely to indicate 'strong' support for these changes (66%), however Hurstville were significantly more likely to indicate only 'slight' support (54%). Although still a minority, Campbelltown participants were also significantly more likely to not support the changes at all (12%, cf. 4% overall).

6.7 Support for the proposed rebate change: unplanned interruptions



In the context of the overall package do you support the changes to the rebates for 'unplanned interruptions'?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Water pressure failure

The token allocation exercise in Phase 1 indicated that water pressure failures were seen as least worthy of a rebate and were allocated the least number of tokens. In order to reflect this, Sydney Water proposed that the rebate amount for one water pressure failure be reduced from $35/quarter (maximum 4 payments per year) to nil, and that the annual service charge rebate (of approximately $80) be paid for 3 or more water pressure failures in a year rather than the possibility of receiving up to $140 a year for four water pressure failures.

While most participants agreed with these changes overall, there were some noted concerns about the varying length of water pressure failures and their relative inconvenience. It was felt that the length of the failure should be taken into consideration in the construction of rebate amounts. Many participants were happy to have no rebate for short water pressure failures of just over 15 minutes, however if the event was ongoing for a number of hours and therefore impacted daily routine, it was felt that perhaps some kind of small rebate should be offered in these cases.

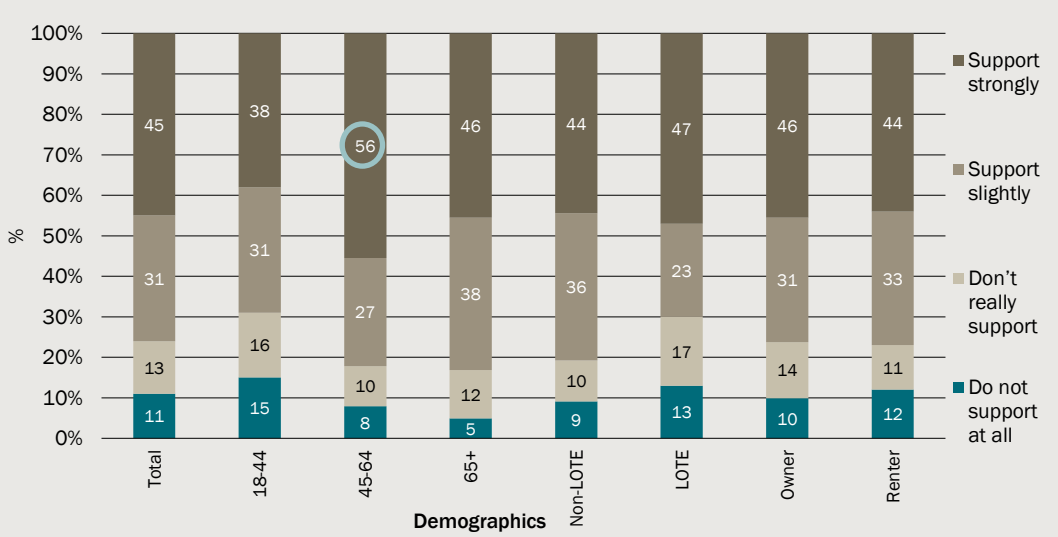
"I'd be happy with nothing if it was just 15min / if it was longer, say for 4 hours that would be an issue." - Campbelltown

The proposed change to 3 or more incidences occurring in a year was well received.

Again, forum participants were asked to vote on the proposed changes to water pressure failure rebates (see Figure 6.8). Although just over three-quarters showed support for the changes overall (76% indicating they supported the changes either 'strongly' or 'slightly'), the support was least strong for the changes for this event compared with the others.

The support was significantly higher amongst CBD participants (58% indicating strong support, compared to 45% overall). However, Hurstville participants were much less satisfied with only 26% indicating 'strong' support. Instead, Hurstville participants were significantly more likely to indicate they didn't really support or did not support these changes at all (23% and 19% respectively).

6.8 Support for the proposed rebate change: low water pressure incidents



In the context of the overall package do you support the changes to the rebates for 'water pressure incidents'?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Discoloured water

The number of tokens attributed to discoloured water rebates in Phase 1 was higher than the current amount that Sydney Water pays for this type of event. In reaction to this, Sydney Water proposed that the rebate amount be increased from $35 per incident, to $40.

Most forum participants were happy with this proposed increase and attributed the amount to go towards the water they would have to run in order to 'flush out' the discoloured water from the system, as well as the inconvenience caused. Some participants also felt that they would perceive some sort of health risk associated with discoloured water and – even though they were not alerted or advised of a health risk – would therefore go out and purchase bottled drinking water. Some other participants were not so concerned with the occurrence and felt a rebate was not necessary, but felt for those who were concerned it was a fair amount.

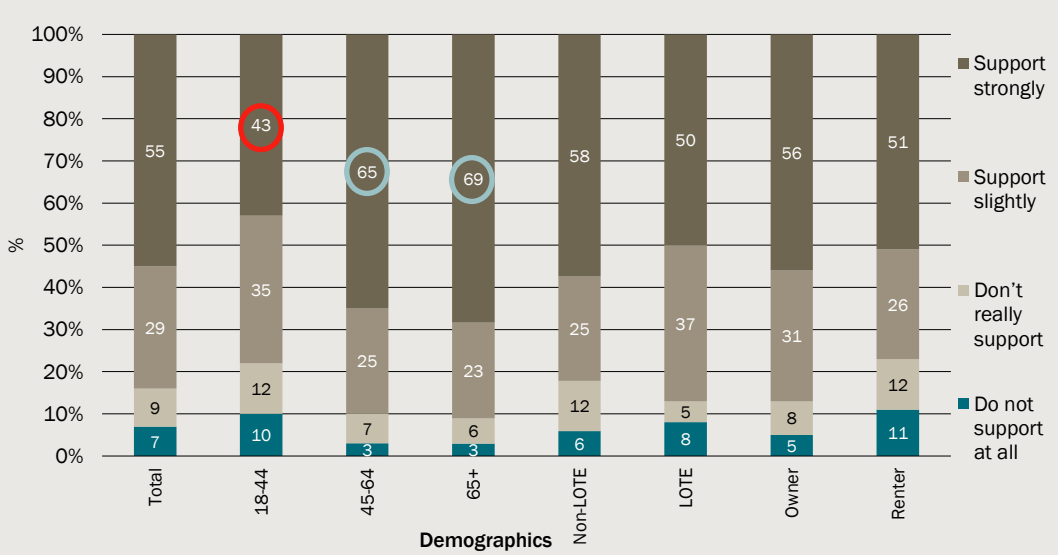
> *"If it's discoloured, surely it's not safe to drink, which emphasises the need for compensation!" - Wollongong*

Forum participants were also asked to vote on their support for the changes to the discoloured water rebate (see Figure 6.9). More than half (55%) of all forum participants indicated that they 'strongly' supported the proposed changes, followed by a further 29% showing 'slight' support.

There were some significant differences in support based on age. Older participants (aged 45 years and older) were significantly more likely to 'strongly' support the changes,

however, those aged 18- 44 years old were significantly less likely to show 'strong' support (43%).

6.9 Support for the proposed rebate change: discoloured water



In the context of the overall package do you support the changes to the rebates for 'discoloured water'?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Discussion groups

Overall, participants in the discussion groups reported that they were supportive of the changes to the rebates as an overall package.

However, participants in the LOTE groups did seem to be more concerned about the impacts of these events on those people who do not speak English as their first language and are not familiar with such events.

Some participants in the Mandarin speaking group, reported that they were more interested in a prompt response to any water-related issues than rebates and stated that the low rebate amounts do not compensate for the "troubles water problems bring".

Those in the small and medium business groups were provided with handouts that showed the annual water and wastewater service charges that applied to different meter sizes (refer to handout 2b in Appendix J). They were supportive of the changes overall but there was a general feeling that they were not high enough for businesses, to cover the inconvenience and potential loss of revenue. They suggested that instead of just certain rebates being linked to meter size (i.e. the annual service charge rebates), all should reflect meter size as this would indicate a business's reliance on water supply and therefore the impact that these events would have. A general comment by businesses was the importance of communication by Sydney Water – adequate notice periods for

planned interruptions and when the problem is going to be fixed for unplanned events as well as where to obtain alternative water supplies if possible.

Similarly to the forums, participants were asked to comment on each of the proposed changes to the current rebate initiatives. Overall, participants across the groups had minimal experience of Sydney Water alerts, interruptions etc.

Boil water alert

Participants across the LOTE groups identified the serious nature of the 'boil water alert', with some groups (Cantonese and Vietnamese) considering that it belongs in a high priority category due to the potential impacts on consumers' health. Participants thought that rebates for this event should reflect the levels of contamination, associated health impacts and financial costs, and the proposed rebate of $50 was considered insufficient, depending on the severity of the event.

> *"It would not mean anything [the current rebate of $35 or the proposed rebate of $50] if a person who consumed the water has to go to the hospital for treatment" (Cantonese speaking participant)*

Participants in the Hindi speaking group were also unclear about the period of time the rebate for 'boil water alert' covered – for example, they questioned whether a one off $50 rebate covers a 'boil water alert' that spans one day or equally spans three months.

Participants in several LOTE groups again raised the issue of the importance of Sydney Water's communication with customers regarding these events. For example, participants in the Hindi speaking group questioned how alerts and notices are processed and how customers are meant to receive these.

Those in the financial hardship groups suggested that the increased rebate amount could be provided for events that happen more frequently rather than this type of event that is incredibly rare.

Business participants were positive about the increase in the proposed rebate for boil water alerts but believed that it should be higher still. For some businesses these types of events would have a large impact, for example restaurants or indeed any business in the hospitality area. It was also mentioned that any business would have to supply alternative water sources to all staff, such as bottled water, as well as to customers which would incur large costs and inconvenience.

Wastewater overflows

Although generally supportive, again there was less support for this set of changes than some of the others.

Participants in the Hindi, Cantonese and Mandarin speaking groups all reported that the current and proposed rebate seemed quite low to cover potential inconvenience and cleaning up costs. Some participants suggested that Sydney Water should carry out an

inspection of the event and that the rebate amount should be set accordingly, rather than offer a fixed rebate amount.

Small and medium business participants generally supported the changes to these rebates.

Water interruptions

Some participants in the Vietnamese, Cantonese and Mandarin speaking groups believed that the proposed rebates for water interruption events, where notice is given, were acceptable. Participants believed that since Sydney Water is carrying out preventative maintenance and repairs, this was considered beneficial for customers. Some of these participants also believed that a decrease in rebates was acceptable if more money was targeted for, and spent on, repairs.

Some Cantonese speaking participants, on the other hand, believed that the proposed rebate for interruptions of five hours or more, with or without notice, was insufficient. For example, they noted that a rebate of $20 (with notice) or $40 (without notice) as a result of an interruption during meal times would not cover costs and inconvenience for a family to eat out.

> *"The rebate would not be able to cover the cost for a family to go to have a meal if the water supply was suspended during the time when the family was preparing lunch or dinner" (Cantonese speaking participant)*

Those in financial hardship mentioned the fact that these rebates would go to the owner rather than the renter (and generally they were renters). With this in mind they suggested that interruptions with notice in particular should not trigger a rebate at all since they could be prepared for anyway.

Small and medium business customers supported the change to the rebate for interruptions with notice but were not as supportive of the change with no notice (even though it was a slight increase). They suggested that interruptions with no notice could have substantial impacts on businesses and that this should be recognised in the rebate amount. A rebate according to meter size was suggested for this type of event to provide recognition of the scale of impact for those with larger meter sizes, hence a greater reliance on water. Sydney Water communicating to businesses where to obtain alternative water supply was also mentioned as a priority in these situations.

Water pressure failure

Overall, those in the discussion groups were supportive of the changes as participants reported that it is not a serious issue if water is not flowing strongly for short periods of time. Under these circumstances, participants felt that rebates are not necessary.

Participants in the Vietnamese, Cantonese and Mandarin speaking groups questioned how consumers prove water pressure failure in order to claim a rebate.

"It would be very inconvenient [three+ water pressure failures for 15 mins or more per year]. The proposed rebate does not reflect the problems that the incidents might bring to us" (Mandarin speaking participant)

Some Mandarin speaking participants felt that water pressure failures occurring three times or more per year would highlight a problem with the water pipes and would be inconvenient. They felt that the proposed rebate of the annual service charge would not necessarily reflect the associated problems that the incidents might cause.

Small and medium business customers suggested that similar to water interruptions, water pressure failures can have a large impact on businesses, again particularly those in the hospitality area, but also hairdressers and others that are reliant on strong water pressure. They suggested that instead of nil, the proposed rebate should be something that is a recognition of the potential inconvenience to businesses, for example $25. However, ideally, as with the other rebates, they suggested that even the single event should be related to meter size.

Discoloured water

Participants in the Cantonese and Mandarin speaking groups thought that discoloured water equated to contaminated water and reported that they would not wish to drink discoloured water. Some participants (in the Mandarin speaking group) were unclear whether the rebate is applicable to each discoloured water event, regardless of the duration between events.

"How long would the discoloured water last? One day, two days or a year?" (Mandarin speaking participant)

"To me, water quality is most important. How do we know the discoloured water is not dangerous? I would not want to drink it." (Mandarin speaking participant)

Participants in the Arabic and Greek speaking groups and the financial hardship groups believed that the proposed change to the rebate in the event of discoloured water was fair. One Greek speaking participant noted that it was "better than getting nothing".

Again, some small and medium business customers were perceived to be really affected by a discoloured water event so it was felt that the rebate would not provide adequate compensation.

"A restaurant can't serve discoloured water even if it is theoretically safe. You also couldn't serve it to staff so you'd have to get bottled water in. That is not going to cover it." Small and medium business participant

In-depth interviews

Customer Council representatives supported all changes to rebates.

Most importantly, it was believed that any changes to rebates should be explained clearly to customers.

This topic was not covered with significant business customers.

7 Results: Pricing structure and billing

7.1 Key findings – proposed rebate changes

Proposed rebate changes
Forum and group participants called for any revisions to the pricing structure and billing to attempt to:
▪ Find ways to educate about/incentivise water saving behaviours
▪ Increase the variable component/ allow for greater control over the bill
▪ Ensure future supply – even if this means charging customers a bit more
▪ Support low income earners and disadvantaged customers
▪ Offer more transparency and clear information on pricing and costs

Source: CIE/Woolcott

Forums

Format of the session

In order to educate participants and stimulate thinking around pricing considerations, information was delivered in the form of a 'pub quiz'. This involved a series of ten questions being put to each of the tables who had to decide on their answer as a group (see handout 3 in Appendix F). The answers to each of the questions were then displayed, with an accompanying explanation by one of the presenters. For example, the answer to one of the questions was that there is no strong relationship between income and water usage.

After the conclusion of the 'pub quiz', each table was asked to discuss key considerations relating to pricing and the structure of the bill. These principles were recorded on flip charts and later presented to the whole room by a nominated table spokesperson. As a prompt, participants were given a handout that included some possible thought starters, including "making bills more predictable", "ensuring there is enough water for the future", "making prices fair for all people", "helping to improve the environment", "helping low income households", "ensuring Sydney Water can recover the cost of past infrastructure project investment" (see handout 4 in Appendix G).

Key considerations in pricing/bill structure

Education/incentives for reduced water usage

> *"More education for being water wise, checking taps, not taking long showers." - Campbelltown*

One of the most commonly discussed considerations was the desire for Sydney Water to incentivise or encourage reduced water usage. Some participants recommended running promotions or educational campaigns on ways to save water and increase water efficiency.

Others felt that Sydney Water should be actively encouraging the uptake of water saving devices, such as water saving shower heads, by subsidising their installation in households. On the other hand, some participants wondered if there was any need for this as it has been done in the past.

> *"Do they still do programs to fit out water saving devices?" - Wollongong*

A third suggestion was for Sydney Water to provide financial incentives for the installation of rainwater tanks and/or greywater systems.

These suggestions tended to be motivated both by a desire to safeguard future water supply as well as to help customers reduce their water bills.

Variable vs. fixed pricing components

There was also considerable discussion and some disagreement about the preferred structure of the bill in terms of the fixed and variable pricing components.

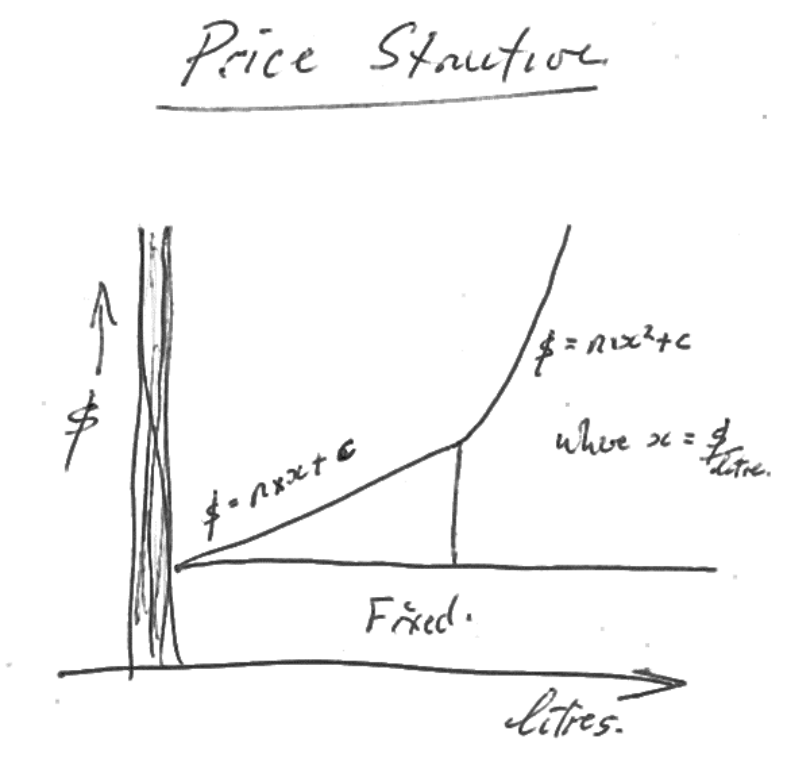
> *"We've got to ensure that we are encouraged to not waste water – don't want the fixed charge to increase so that we encourage wastage." - CBD*

Overall, the majority of participants were in favour of increasing the variable component of the bill. One of the key reasons behind this was the idea that it should be a 'user pays' system whereby high users pay more than the lower users. Another advantage put forward was that a high variable component incentivises households to try to lower their usage, while a higher fixed price may encourage greater water usage and de-incentivise water saving devices and systems.

> *"Tiered usage charges to encourage water conservation" - Campbelltown*

Of those in favour of a larger variable component, some even suggested introducing a tiered variable price such that higher levels of usage attract a higher usage charge for each additional amount of water. Those presenting these sorts of options were usually trying to provide strong financial penalties for those felt to be wasting water, i.e. those in the top 5% of usage. An example of such a system that was drawn by a participant is presented below:

7.2 Example from participant



Alternatively, those in favour of a higher fixed component usually cited the advantage of having a consistent and predictable bill. In addition, preventing the possibility of 'bill shock' was also presented as a benefit, especially for larger low income families.

"Having a fixed component is important so that SW can plan and maintain their infrastructure. It is also important for households in that it provides a degree of certainty" - Parramatta

Ensuring future supply

A commonly expressed view was that it is very important to ensure that there is an adequate supply of water for the future, especially given Sydney's growing population. Key aspects mentioned were repairing old pipes, increasing capacity in Sydney Water's systems as well as increasing overall capacity of water supply such as by building new dams. Most who expressed this view were willing to pay a bit more through their water bills if it meant that Sydney Water could be proactive at addressing this issue.

"We should consider a water levy for 'future proofing' infrastructure, we will need more water in the future" - Penrith

A small number of participants suggested implementing a pricing structure that would increase the cost of water once the dams reduced to a certain level. The thinking behind this was to discourage discretionary water use during times of shortage.

Although many participants were willing to pay for future investments, there was some disagreement and distrust over the need to pay for past investments. For some the view was that Sydney Water should have already paid for past investments, or at least already have financed the means for paying for these. This may reflect a general misunderstanding and lack of knowledge about how Sydney Water pays for long terms assets.

"They should be paying for future projects not trying to recover the money from previous investment, this suggests poor management" - Hornsby

The Sydney desalination plant was often associated with the need to pay for past investments. While most realised that the desalination plant was not owned by Sydney Water, there was uncertainty over the impact of the plant on Sydney Water bills. It was common knowledge that the plant is expensive to run and maintain, but will not be used unless the dam levels reach 60%. Accordingly, most respondents tended to be quite negative during their discussions.

Overall participants were receptive to the idea of paying more for future investments such as dams and bigger pipes, but were reluctant to pay for past investments, especially the desalination plant.

Support for low income earners

Most tables mentioned providing some sort of support for low income earners. A commonly expressed view was that water is a basic necessity for life, and needs to be accessible to all. Many also argued that low income earners could still be high water users, and therefore receive high bills, as water usage is strongly dependent on the number of people in a dwelling rather than income.

"Take into account low income households – everyone should have access to water" - CBD

During these discussions pensioners were thought to be a key group that require support. However, several respondents either received or knew of discounts that are already given to pensioners and were very positive about the generosity of these. Accordingly, feedback tended to focus on other groups who do not currently receive discounts, namely low income earners.

Suggestions for assisting low income earners included granting them more time to pay their bills, applying a rebate to their bill, applying a percentage discount to the bill or capping the maximum possible bill amount. Although there was usually a general agreement with these suggestions, there was some discussion around what actually counts as a low income earner, and how generous the support needed to be.

"There should be capped prices for pensioners and low income people. It needs to be means tested" - Wollongong

Information on the bill

Participants also thought it was important that Sydney Water review the information presented on the bill, although there were contradictory views about what this should involve.

Some participants wanted a greater amount of information provided on the bill, including comparisons with similarly sized households or with usage during the previous year. Others requested more specific information, such as usage according to time of day or broken down by different sections of the house. A third type of information desired was water saving tips and information about how much water is typically used by different household activities.

"They could have a whole years worth of information, or similar to the energy bills they could show a comparison to last year to give you a better idea of how usage has changed" - Parramatta

On the other hand, another group of participants thought the bill was currently too complex, and wanted it to be made clearer and simpler. Using plain English and avoiding jargon were common suggestions, for example explaining in a sentence how much of the bill is for usage and how much is for fixed charges. Rebates were another aspect that some thought could be presented and explained more clearly, especially since most who hadn't attended the phase 1 forum were not aware of them and nobody had seen a rebate on their bill.

"It would be good if SW could somehow improve the clarity of the bill to make it easier to understand" - Hurstville

Other considerations

In addition to the main considerations mentioned above, there were a number of other considerations that were mentioned less frequently.

One was the need to ensure that all customers have their own water meter and are billed individually, rather than paying through a shared meter as occurs in some apartments and units. Several participants had experienced this first hand and thought that the system was unfair to lower users and encouraged greater overall water usage. In some cases participants mentioned that all new apartments are built with individual water meters which most thought was a good idea.

"In apartments there is no incentive to save water" - Hornsby

Transparency around pricing was a consideration that several tables felt to be important. Overall, participants wanted to have a better understanding of how Sydney Water spends the money it receives through customers' bills, for example how much goes towards upgrading the existing infrastructure.

"What happens when everyone reduces their water – does the fixed price go up?" - Penrith

Some wanted more information about how the fixed and variable prices are calculated and how this related to overall water usage in the network.

The environment was also mentioned by several tables, and it was generally agreed that Sydney Water needs to be managing environmental impacts. Participants were unsure if this was something that is already financed through the bill, or if an additional fee is needed to ensure that the environment is proactively protected.

"It's important to help the environment somehow – but I'm not sure how this can be incorporated into pricing" - Parramatta

Discussion Groups

Similar considerations were mentioned by those in the discussion groups.

Participants' individual circumstances as well as considerations for low income households influenced responses to water pricing structures across the groups.

The financial hardship groups believed that the pricing principles should bear in mind that those in Housing Commission accommodation pay the usage charge only, so increasing this proportion of the bill would result in higher bills for those on low incomes. However, they also acknowledged that having a low usage charge would not encourage people to use water carefully and look after the environment. They believed that the best way forward may be to have a higher usage charge but that those on low incomes could get concessions as they do for electricity.

Small and medium businesses lacked awareness and understanding about what the different elements were in their bills. Most did not know what their meter size was, what a kL represented or how much they were charged per kL. Some requested that Sydney Water make the bills clearer and easier to understand.

"As businesses we all write invoices and create bills, Sydney Water's are not clear." - SME participant

When asked about pricing principles, the small and medium business participants stated that they were purely price driven so anything that gives them the lowest cost will be supported. Having said that, water was thought to be one of the lowest outgoings in terms of bills, so most stated that they spent little time evaluating their water prices or bills. If the amount to be paid was similar to previous bills then they just paid it with little consideration.

Some suggested that there should be an allocation of water to businesses of different types and sizes, and that if businesses go over that amount then they should have to pay a penalty. This would encourage them to try to save water.

8 Results: Water pricing options

8.1 Key findings – water pricing options

Water pricing options
▪ In general there was a preference by residential participants to increase the variable charge and decrease the fixed charge (45%) rather than increase the fixed charge and decrease the variable charge (21%). There was also a large proportion who preferred that the pricing remains as it is currently (34%)
▪ Of the presented scenarios, Scenario C was the preferred option by most residential customers as it reflected the above sentiment (increase in variable charge and decrease in fixed charge) – just over half in the forums voted for this option (52%). It was thought to encourage reduced water usage, and appeared to benefit most of the main customer groups. Although high consumers were thought to be disadvantaged under this scenario it was argued that it was only a small increase in price. The current scenario was second most preferred (34%) and most similar (second highest usage charge) to Scenario C
▪ There were some suggestions that Sydney Water should consider a tiered variable pricing structure which would increase at higher levels of usage, to encourage water saving behaviours
▪ There were also suggestions that customers should be able to choose the 'pricing plan' that suits their individual circumstances like they can in other industries such as electricity and telecommunications
▪ A greater proportion of the financial hardship customers preferred the current scenario than those in the forums, because they generally just paid the usage charge, so it was feared that any increase in this would be passed onto them
▪ There was concern by the Customer Council representatives that Scenario C might affect a disproportionate number of those on lower incomes and from Aboriginal backgrounds as they are more likely to have larger families
▪ The tariff surveys showed a strong preference for the proportions to remain the same as they are currently. However, this could be due to the complexity of the slider activity included in the surveys resulting in respondents choosing the status quo
▪ Amongst citizens there is a slightly stronger preference for any changes in pricing to be made gradually over 2 to 4 years rather than upfront (56% at the forums if the variable is increased and 58% at the forums if the fixed is increased), with a slight preference for over 2 years rather than over 4 years
▪ In the citizens survey, there was also a slight preference for a gradual transition to any new pricing structure over 2 to 4 years whether it was an increase to the variable or fixed proportion (50% and 46% respectively)
▪ Again, for LOTE customers the timing of the transition was not as important as Sydney Water communicating any changes in advance in a clear and easy to understand way, preferably in languages other than English
▪ Small and medium business customers did not have a strong preference as the bill impacts were seen to be negligible. In the groups, those who did choose a scenario seemed to go for Scenario C since a higher usage charge could provide more possibility of reducing bills by reducing water usage. Amongst businesses there was a stronger preference for a quicker change than residents
▪ The significant business customers reported that the water charges were an insignificant proportion of their bills so the decision for them was not of high importance. Since they were purely price driven Scenario A was the obvious choice for them. Although as with the small and medium businesses, some suggested that a higher usage charge could encourage the adoption of water saving measures

Source: CIE/Woolcott

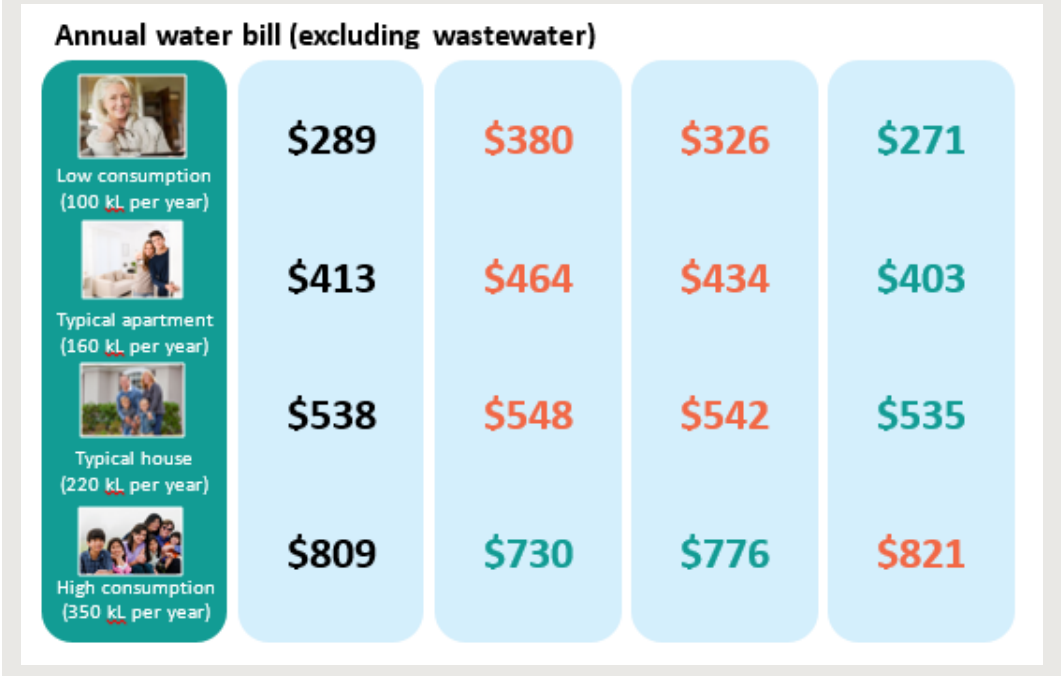
Forums

Forum participants were asked to discuss the ideal proportion of fixed versus variable prices for the water bill, and were presented with three hypothetical scenarios (A, B and C) in addition to the current pricing system. The impact of each of these scenarios was also explained using four hypothetical customers as examples. The summary handout that was distributed to participants to aid discussion show the different dollar amounts (see Figure 8.2) as well as to demonstrate the impact on different levels of water usage (see Figures 8.3) (see also handout 5 in Appendix G).

8.2 Proposed pricing options

Source: Sydney Water

8.3 Impact of proposed pricing options on different household water consumptions



Source: Sydney Water

Ideal proportions

This section generated a lot of discussion as participants often disagreed with each other in determining their preferred pricing scenario.

Of the scenarios presented Scenario C was the most popular. Participants liked this scenario because it encouraged reduced water usage, and appeared to benefit most of the main customer groups. Those who were low water users were particularly likely to favour this scenario. Although the high consumption customer would be worse off under this scenario, many participants argued that this was only a small increase compared to the current approach.

"I like the idea of Scenario C – doesn't disadvantage the high users all that much, and the lower users are rewarded." - Penrith

The next most consistently chosen option was to remain with the current approach. For some this was because they are already satisfied with the cost of their water bill, and did not see any of the three scenarios offering a dramatic change. Others found it difficult to choose a scenario as this would adversely impact at least one type of customer, whether it be a single person or large family, and so found it easier to remain with the status quo.

"If people are happy, why go to the hassle of changing it?" - Hornsby

Scenarios A and B did not attract much support. Participants who argued for these scenarios tended to be either high water users themselves, or renters who only paid for the water usage charge. In both of these cases the main motivation was the beneficial impact on their own personal bill. Some chose Scenario A or B because they wanted better bill predictability (although most thought that water bills are very predictable quarter to quarter anyway). A small number of participants were in support of Scenario A or B because it was felt to be more reflective of Sydney Water's overall cost structure. On the other hand, many were strongly against Scenario A as it was felt to encourage increased water usage (and wastage), while also adversely impacting low water users, such as pensioners.

"From the renters perspective, scenario A is an excellent situation, but for the landlord, they'd be paying almost triple the bill." - Parramatta

Some participants who supported Scenario C were actually in favour of increasing the variable price even further under an imagined 'Scenario D'. Others suggested, as they had in the previous pricing discussion, that Sydney Water should consider a tiered variable price which would increase at higher levels of usage. The reasoning behind this pricing approach was typically to penalise high water users who were felt to be wasting water.

"If you increased it by more than Scenario C you would definitely be incentivising the large family to stop having so many water fights." - Wollongong

It was explained to participants during the initial presentation that Sydney Water have to choose a single pricing structure that is applied to all customers. Despite this, some participants were very vocal in their desire for Sydney Water to allow customers to choose their own pricing plan. This was felt to be a fair option as it would allow all types of users to choose a plan that provided the best value for their level of usage. Participants compared this to other industries, such as electricity, gas, internet and health insurance, where customers have the ability to choose from a range of plans. These proposals usually generated high levels of support from other participants at the table.

Low income households

Although many participants were concerned about the potential impacts of each water pricing scenario on low income households, they found it difficult to act on this as both low and high water consumption households could potentially be low income.

"I just wonder, why does it have to be a one size fits approach, everyone should be able to choose a plan that suits them" - Campbelltown

A small number of participants were less sympathetic towards low income large families as it was felt that they had chosen to have a large family.

"What you want is fairness above everything else, water is an important commodity that everyone needs. You need low incomes to afford it - Hurstville

Those who were the most concerned about the potential impact on low income households tended to choose the current approach, since this would not lead to any customers being worse off than they are currently.

"It would be great to have the choice to see what would suit your household like you can with other bills."- CBD

At the completion of this discussion section, forum participants were asked to vote on their preferred proportion of fixed vs variable pricing charges (see Figure 8.4).

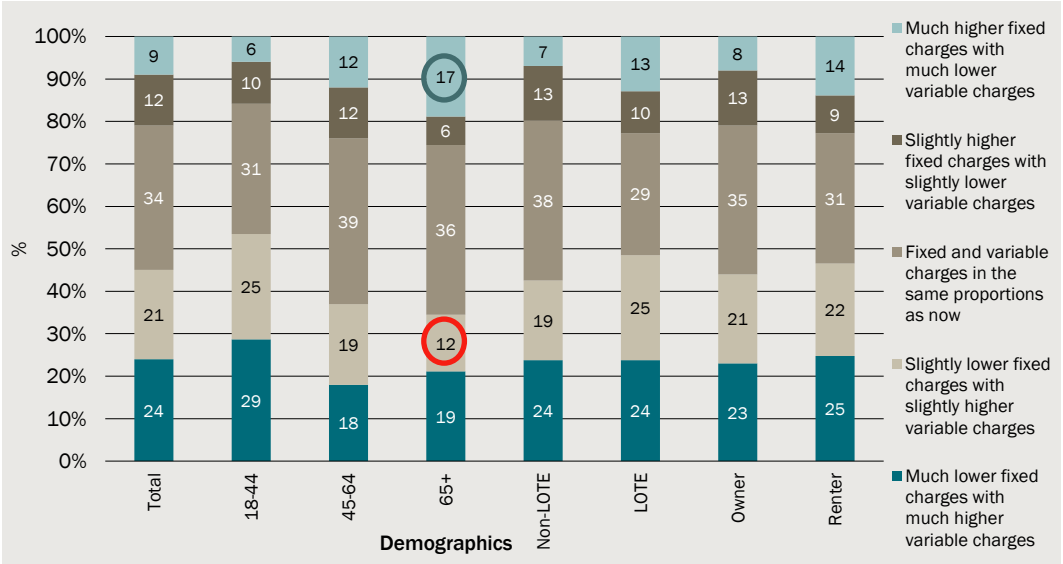
Just over a third of all forum participants (34%) indicated a preference for the variable and fixed charges to remain the same as they currently stand. A similar proportion (35%) had a preference for proportions to reflect lower fixed charges and higher variable charges

with only one in five (21%) indicating an overall preference for higher fixed charges and lower variable charges.

Campbelltown participants were significantly more likely to have a preference for the current proportions (51%), as well as slightly higher fixed charges, with a slightly lower variable charge (22%). Whereas the Hornsby forum indicated a significantly higher preference for slightly lower fixed charges with a slightly higher variable rate.

Although most in all age groups preferred the current proportions, significant differences in preference were seen across age groups, with older demographics showing a slight skew towards higher fixed rates and lower variable rates, and younger demographics preferring higher variable rates and lower fixed rates. Those aged 65 years or more were significantly more likely to show a preference for a much higher fixed charge and much lower variable charge (17%) compared to the total (9%).

8.4 Preferred proportion of fixed versus variable charges



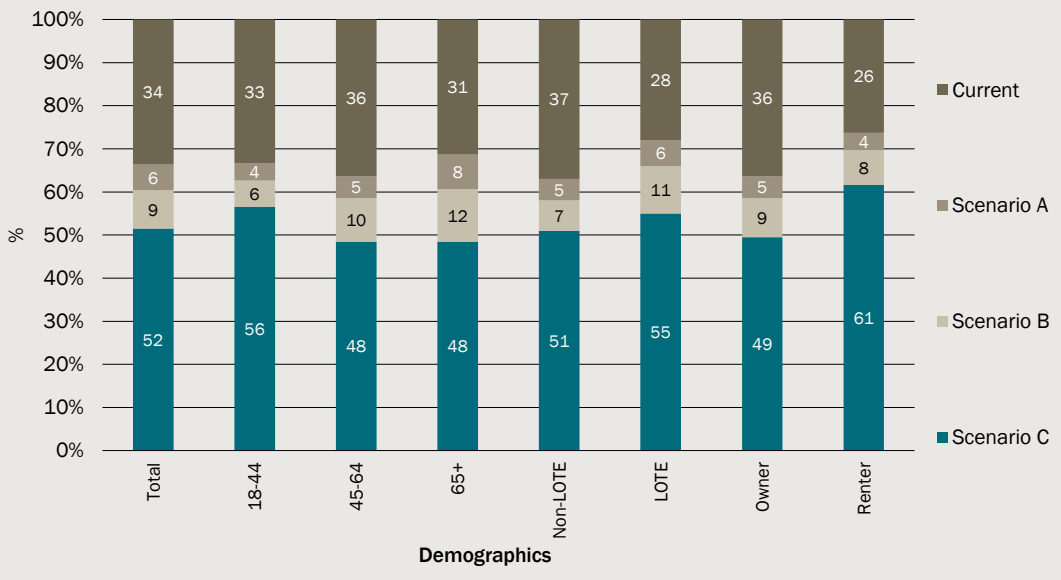
What is your preferred proportion of fixed versus variable charges?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Participants were then asked to vote on their preferred scenario overall, including the option to keep the current scenario (see Figure 8.5). As seen in the previous graph (Figure 8.4), 34% indicated a preference for the current proportions of variable and fixed rates, which was reflected in the scenario preferences (34% preferring the current scenario). This was significantly higher for Campbelltown participants (47%).

Overall, the preference was for Sydney Water to move towards Scenario C where the variable proportion was increased to $2.20 per kilolitre and the fixed charge was decreased to $50.73 p.a. (52%), which was significantly higher amongst those aged 18-24 years (68%). Again, Campbelltown was the only location to break this trend, with significantly less indicating this as their preference (38%).

8.5 Preferred water pricing scenario

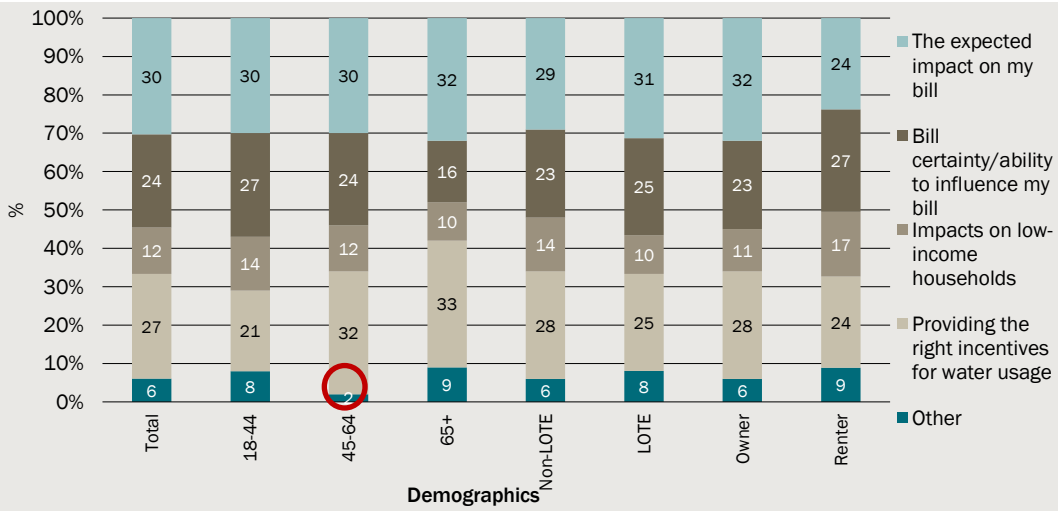


Which of the four water pricing scenarios do you prefer?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Finally, forum participants were then asked to indicate their first and second 'reasons' for why they chose their preferred scenario (see Figure 8.6 and 8.7). The most important considerations were the expected impacts on people's personal bills (30%), and providing the right incentives for water usage (27%), while the second most important considerations were the expected impact on personal bills as well as bill certainty / the ability to influence personal bills.

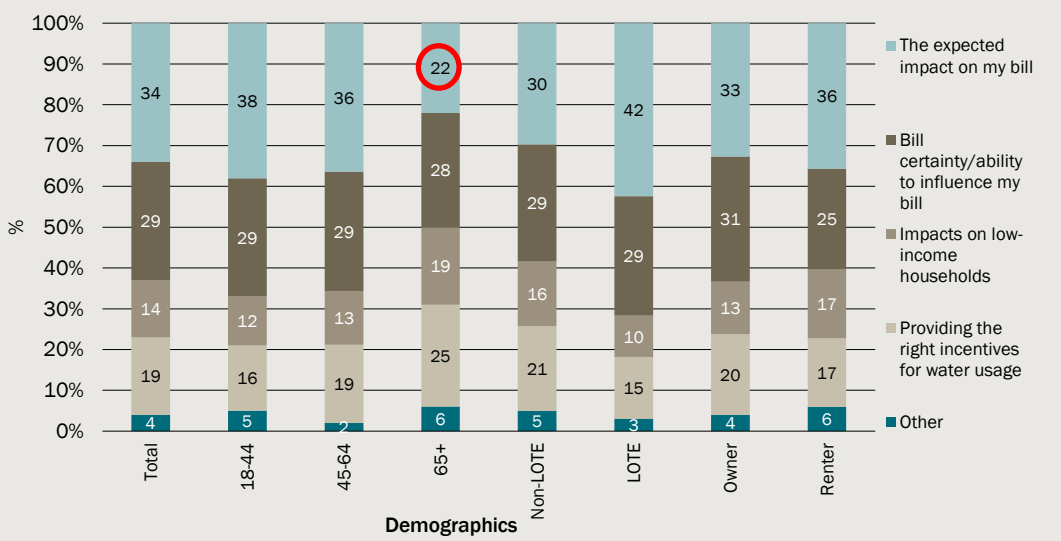
8.6 Most important consideration when choosing preferred scenario



What was your most important consideration when choosing your preferred scenario?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

8.7 Second most important consideration when choosing preferred scenario



What was your second most important consideration when choosing your preferred scenario?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Transition preferences

There was no strong consensus regarding how gradually Sydney Water should implement any changes to the pricing structure.

Slightly over half of participants were in favour of a gradual introduction over several years, as this would ease customers into the new system, avoid bill shock and allow time for them to change their behaviours.

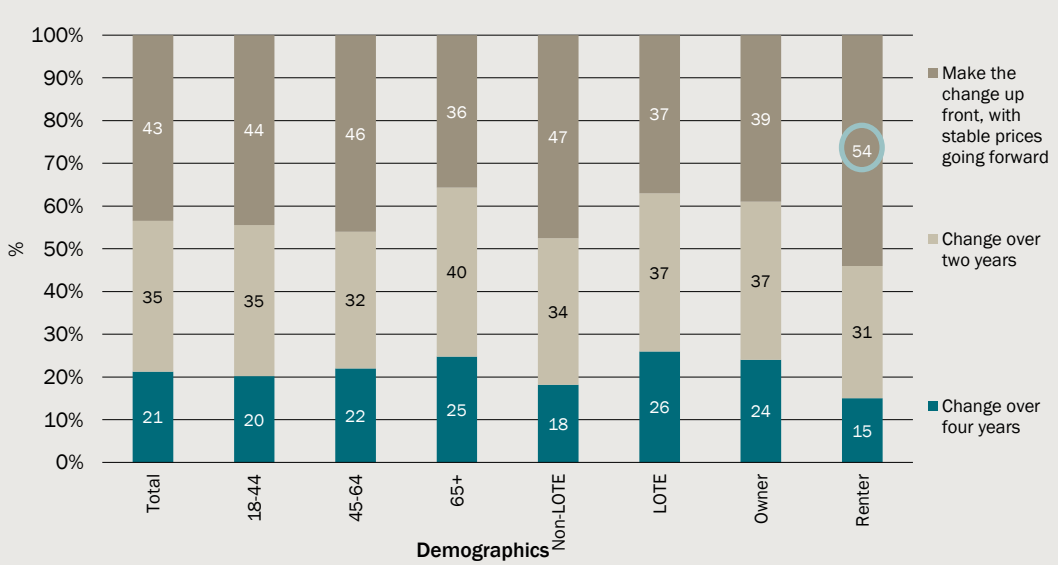
Slightly under half were in favour of a quick introduction as it was not felt to be a large change in terms of financial impact. Some also argued that a sudden introduction towards a higher variable charge might encourage greater behavioural change amongst high water users as opposed to a gradual increase which they might not notice and therefore act on.

"Doing it gradually allows for people to adapt without having their budgets affected too heavily - Hurstville it - Hurstville

"As long as you communicate clearly and let everyone know what is going on, then I would like to see the change happen all at once." - CBD

This division was seen in the voting when forum participants were asked to identify their preference for immediate or gradual changes (see Figures 8.8 and 8.9). Whether usage charges were increased or decreased in proportion (and conversely fixed charges decreased or increased), just over half showed a preference for gradual change (56% and 58% respectively), with a slight overall preference for change to occur over two years, rather than four. However, around two in five participants identified a preference for changes to be made up front (43% and 42% respectively).

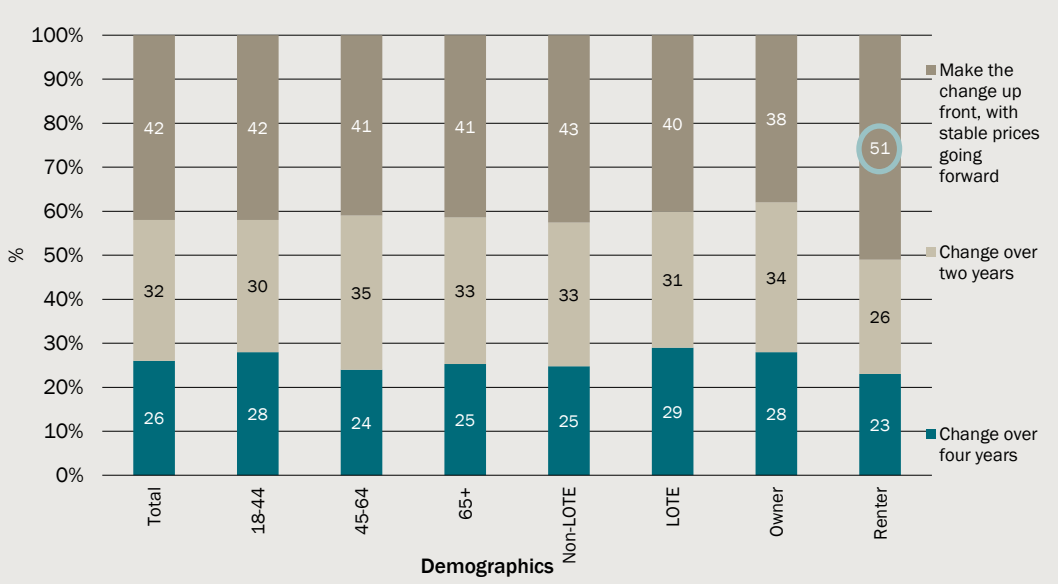
8.8 Ideal time frame for increasing the usage charge



If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

8.9 Ideal time frame for increasing the fixed charge



If Sydney Water were to decrease the usage charge and increase the fixed charge, how gradual should the change be?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Discussion groups

Participants in all LOTE discussion groups believed that pricing can affect water wastage – that is, if variable prices are too low consumers will waste more water. Several Mandarin speaking participants thought that Scenario A would send the message that water is cheap to use and would increase usage.

> *"Scenario A would be bad for the environment as this would send the wrong message to people that water is cheap to use, they would use more water." (Mandarin speaking participant)*

The majority of participants in all LOTE groups preferred a reduction in the fixed charge and an increase in the usage charge (Scenario C). Participants in the Vietnamese, Arabic, and Hindi groups commented that the more usage, the more wear and tear to the water pipe system. It was believed, as already mentioned above, that a higher usage charge might limit consumer's usage. Participants also referred to this scenario as fairer to landlords who currently pay a "huge fixed price" when tenants are consuming and only paying the low water usage charge.

> *"Everyone needs to be made responsible for their usage rather than a structure where majority of the bill (fixed) is paid by the property owner" (Hindi speaking participant)*

Cantonese and Mandarin speaking participants preferred Scenario C as they believed it promotes fairness, as in 'user pays' and affordability, i.e. the low-income families or small households could not save much money when the fixed charge is high.

Several Vietnamese speaking participants suggested that Sydney Water offer tailored payment plan options to consumers, much like mobile phone plans, believing this would allow consumers more choice and control over their water bills.

> *"If you need to use more data, you pay for it. For Sydney Water, a family with seven people living in a house would need to use more water than a couple living in an apartment. The family could opt for a higher fixed charge and lower usage charge and the couple living in the apartment could opt for a lower fixed charge and a higher usage charge" (Vietnamese speaking participant)*

Most of the LOTE group participants did not think the timing for the transition was as important as Sydney Water communicating with customers in advance of any changes taking place. This would include communication in languages other than English, and

> *"We need enough notice and Sydney Water need to create awareness about changes … awareness, education, information and then change" (Hindi speaking participant)*

would also include information disseminated through the media/advertising and included in their quarterly bill.

In the financial hardship groups there was a mix of support for the current structure and Scenario C. As mentioned previously, those in Housing Commission accommodation or renting often just pay the usage charge, which meant that any scenario with a higher usage charge was unappealing (Scenario C). The status quo was thought to be the least concerning option to these customers. It was also thought that changing the structure could cause anxiety for people if they didn't understand the changes and how they were going to affect them. However, there were also some in the groups who were environmentally conscious so believed that Scenario C was the ideal option as it would encourage more water saving behaviours.

"It will cause anxiety for people if they change it." (Financial hardship participant)

"I think it's more to do with plenty of information and notice to people, so they are aware, and know about the changes. If you do it right away, people may not know it, but you don't need a year, if you have lots of advertisements, especially information in other languages, not just English, I think a period of about six months, that's time for two bills, and in each bill there is also information and reminder about the change" (Cantonese speaking participant)

The small and medium business participants were provided with tailored summary handouts showing the different dollar amounts for varying meter sizes (see Figure 8.10) as well as demonstrating the impact on different levels of water usage (see Figure 8.11) (see also Appendix K).

8.10 Proposed pricing options (all and medium businesses)

	Current	Scenario A	Scenario B	Scenario C
Water usage charge	$2.08 per kilolitre	$1.40 per kilolitre	$1.80 per kilolitre	$2.20 per kilolitre
Water fixed charge 20mm	$20.19 per quarter	$60.08 per quarter	$36.38 per quarter	$12.68 per quarter
Water fixed charge 50mm	$126.05 per quarter	$375.50 per quarter	$227.39 per quarter	$79.27 per quarter
Water fixed charge 80mm	$322.70 per quarter	$961.28 per quarter	$582.12 per quarter	$202.92 per quarter

Source: Sydney Water

8.11 Impact of proposed pricing options on different meter sizes (small and medium business)

Quarterly water bill (ex. wastewater)	Current	Scenario A	Scenario B	Scenario C
Strata unit (20mm meter, 25 kL/qtr)	$72	$95	$81	$67
Low user (20mm meter, 75 kL/qtr)	$176	$165	$171	$178
Medium user (50mm meter, 1675 kL/qtr)	$3 610	$2 721	$3 242	$3 764
High user (80mm meter, 6500 kL/qtr)	$13 843	$10 061	$12 282	$14 503

Source: Sydney Water

As stated previously, the small and medium business participants were purely price driven so the decision was all about whether they could reduce their bills under different pricing structures. Most of the participants (if they did know it) thought they had a 20mm meter size so the scenarios presented resulted in very little change to the bill. Hence most selected Scenario C as this was thought to provide more control in order to be able to reduce their usage and in turn reduce their bill. Others suggested that it was not worth changing the current structure because of the low bill impact. Some suggested that Sydney Water offer other forms of reward and incentive, such as reduced bills for paying in advance or a 'pay on time discount'.

In terms of the transition, most suggested that it be done quickly, particularly since the change to bills was seen to be negligible.

"The difference in price is not big enough for me to care." (SME participant)

In-depth interviews

Customer Council representatives thought that conceptually a lower fixed component seemed the best option, so that customers have more control over their bills and it would help to encourage reduced water usage which in turn would be environmentally friendly.

"There is no winning on this one. Someone is disadvantaged." (Customer Council representative)

However, there was some concern that although Scenario C seemed like the obvious choice, this would affect those families with more children, which are more likely to be on lower incomes or Indigenous. It would also affect renters more. Should a higher usage charge be implemented education would be required on how to reduce water usage. Block pricing was also suggested as a way to encourage lower water use.

There was also a concern that some rebates represent the fixed service charges so what would happen if the fixed component is reduced? This would impact on disadvantaged households.

In terms of whether it should be a gradual or sudden transition they thought it really depended on whether it was going to affect the bills of those on a low income in a positive or negative way. If Scenario C was chosen and it was going to put bills up for larger households then a gradual transition would be preferable. The crucial factor for disadvantaged households was being really well informed about any bill changes.

Significant business customers were provided with tailored summary handouts showing the different dollar amounts for varying meter sizes (see Figure 8.12) as well as demonstrating the impact on different levels of water usage (see Figure 8.13) (see also Appendix M).

8.12 Proposed pricing options (significant business customers)

	Current	Scenario A	Scenario B	Scenario C
Water usage charge	$2.08 per kilolitre	$1.40 per kilolitre	$1.80 per kilolitre	$2.20 per kilolitre
Water fixed charge 50mm	$126 per quarter	$376 per quarter	$227 per quarter	$79 per quarter
80mm	$323 per quarter	$961 per quarter	$582 per quarter	$203 per quarter
100mm	$504 per quarter	$1502 per quarter	$910 per quarter	$317 per quarter

Source: Sydney Water

8.13 Impact of proposed pricing options on different meter sizes (significant business customers)

Quarterly water bill (ex. wastewater)	Current	Scenario A	Scenario B	Scenario C
50mm meter, 2 500 kL/qtr	$5 326	$3 876	$4 727	$5 579
50mm meter, 25 000 kL/qtr	$52 126	$35 376	$45 227	$55 079
80mm meter, 20 000 kL/qtr	$41 923	$28 961	$36 582	$44 203
100mm meter, 30 000 kL/qtr	$62 904	$43 502	$54 910	$66 317

Source: Sydney Water

The significant business customers included in the engagement generally reported that the water charges are a small component of their overall bill, with much of the costs resulting from trade waste charges. Therefore the debate about the proportion of fixed versus variable charges was not seen as a key priority for them.

Having said this, the way the scenarios were presented showed a higher cost saving under Scenario A in particular, and since cost was the main priority for all these customers, Scenario A was preferred by all. Introducing a higher fixed proportion of the charges was also thought to make the bills more predictable which was an advantage.

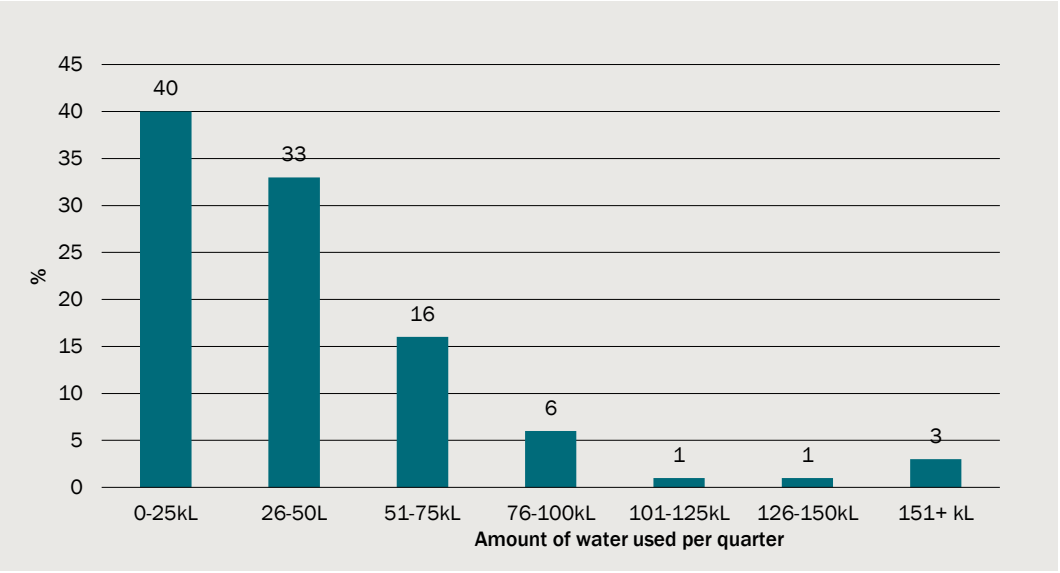
"Predictability is very helpful to any business." (Significant business customer)

However, it was mentioned by a couple of participants that a higher usage component could actually result in the business looking at implementing water saving processes resulting in lower usage which could reduce bills anyway. The preferred option was purely related to how much money could be saved.

Residential tariff survey

Respondents in the tariff survey were asked what their quarterly water use is, either by looking at their bill or estimating. The majority of respondents used up to 50kL a quarter (73%).

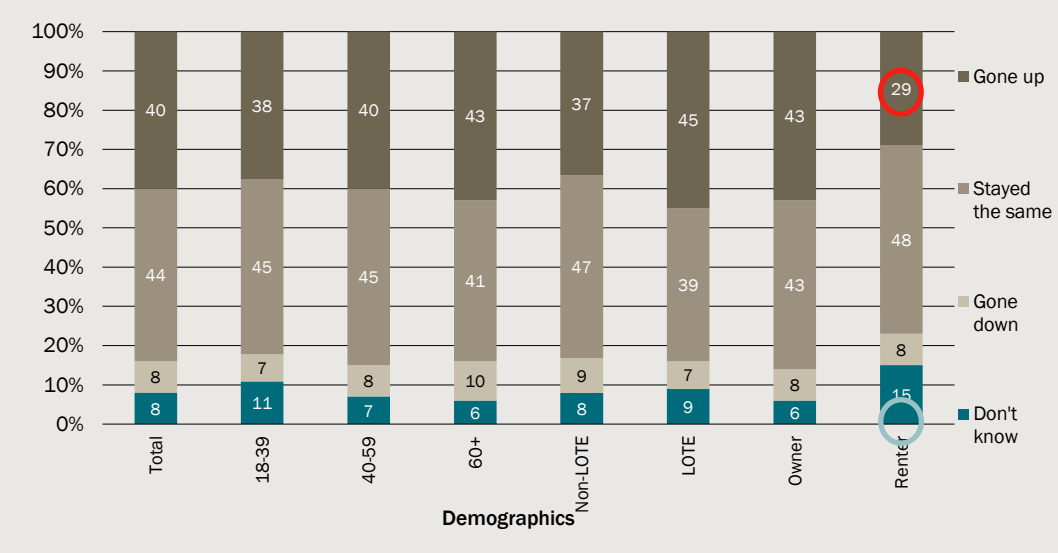
8.14 Indication of respondents' water usage



Q11. (Respondents with water bill) Please indicate the quarterly usage on the front of your bill.
Q12. (Respondents without water bill) Please give a rough estimate of the amount water that you use each quarter. As a guide:
a small household, with no garden, uses around 25 kL each quarter
a typical household, uses around 50 kL each quarter
a large household, or a household with a garden, uses around 75 kL each quarter
Base: All respondents (n=1003)

Respondents were asked whether they think their water bill has gone up, stayed the same or gone down over the last 12 months. Forty four per cent (44%) believed that it has stayed the same while 40% believed that it has gone up. Renters were less likely to think it had gone up compared to the same time last year (29%).

8.15 Respondents' change in water usage over 12 months

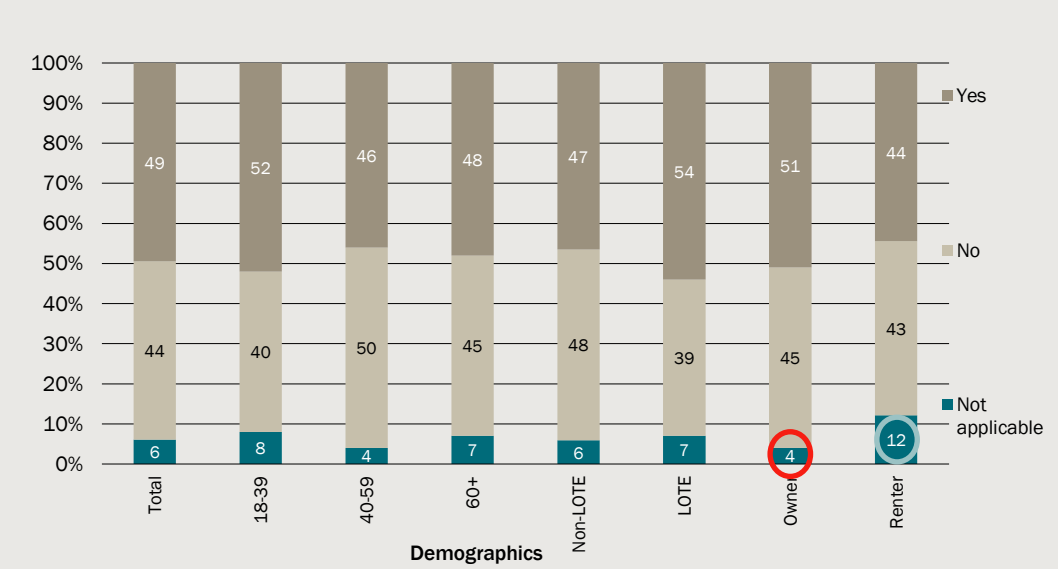


Q13. Compared to this time last year, do you think that your water bill has…?

Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

There were mixed views as to whether they monitored their usage and changed behaviours if their bill increases with 49% stating that they do and 44% stating they don't.

8.16 Respondents' likelihood to change behaviour due to bill increases



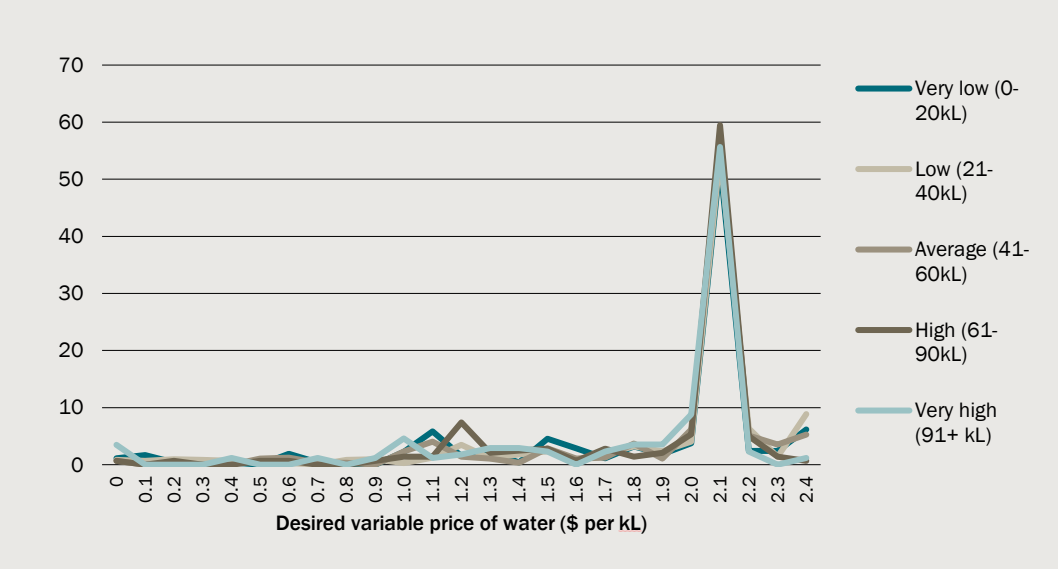
Q14. Do you monitor your water usage and change your behaviour if your bill increases?

Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

Respondents were provided with similar information to the forums (refer to questionnaire in Appendix N) and then asked to indicate their preferred balance between fixed and variable charges by moving a slider - moving the slider to the left increased the fixed charge and decreased the variable charge, whilst moving the slider to the right decreased the fixed charge and increased the variable charge. A reference was given that currently Sydney Water charges a water usage price of $2.08 per kilolitre of water used and a fixed charge of $80.67 per dwelling per year. They were also presented with a second slider that showed quarterly water consumption so they could use this to see what the bill impacts were with different levels of water consumption.

There was a very strong preference for the proportions of fixed and variable components to remain as they currently are (usage at $2.08). However, this could be due to the complexity of the question within a survey format resulting in many respondents simply selecting the status quo.

8.17 Preference for fixed or variable charges

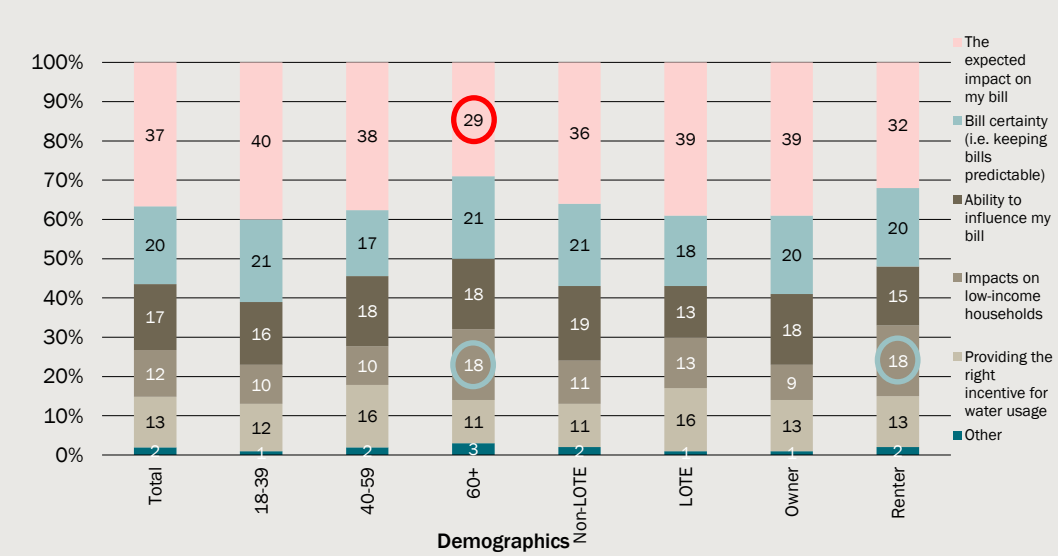


Q15. Please indicate your preferred balance between fixed and variable charges by moving the first 'slider' below.

Base: Very low (0-20kL) (n=237); Low (21-40kL) (n=319); Average (n=41-60kL) (n=247); High (61-90kL) (n=128); Very high (91+ kL) (n=72)

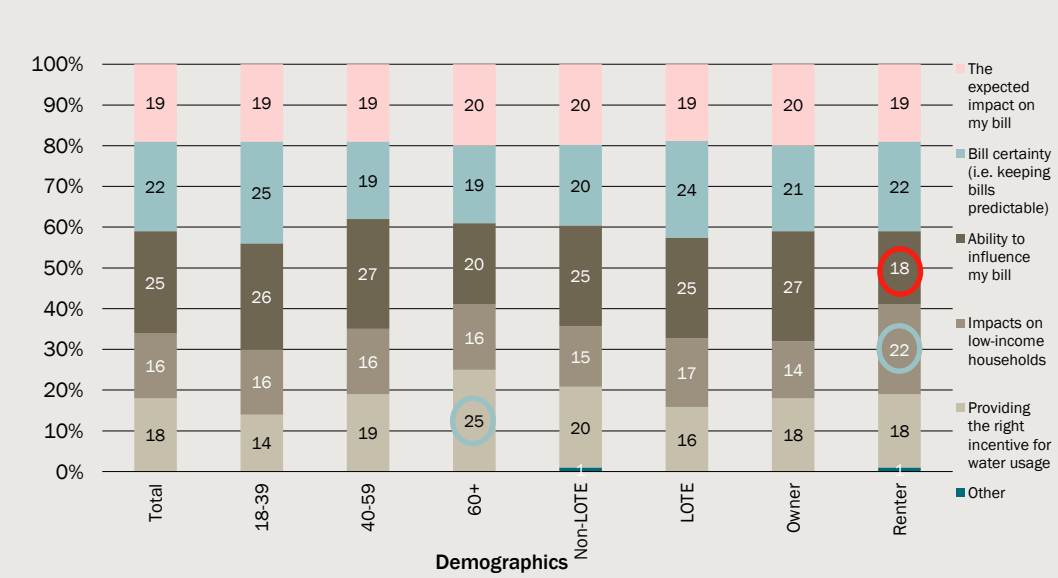
The reasons provided for their choice were varied, the main factor being the impact on their bill, with renters and over 60 year olds being more likely to select the impact on low income households as the reason for their choice than other groups. The second reason for their choice was also varied with over 60 year olds more likely to say it was due to 'providing the right incentive for water use'.

8.18 Most important consideration when choosing preference for fixed vs variable charges



Q16. What was your most <u>important consideration</u> when choosing your preferred balance between fixed and variable charges?
Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

8.19 Second most important consideration when choosing preference for fixed vs variable charges

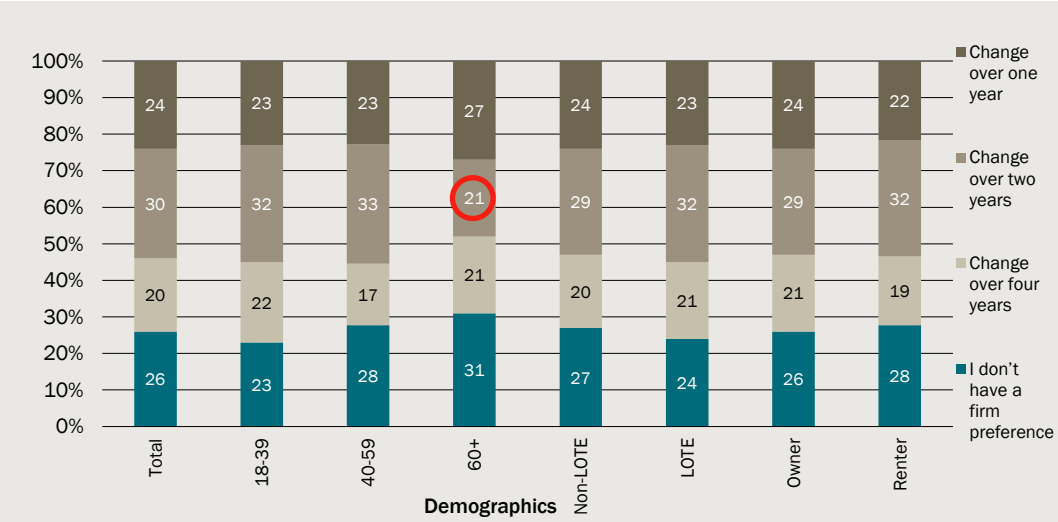


Q17. What was your second most important consideration when choosing your preferred balance between fixed and variable charges?

Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

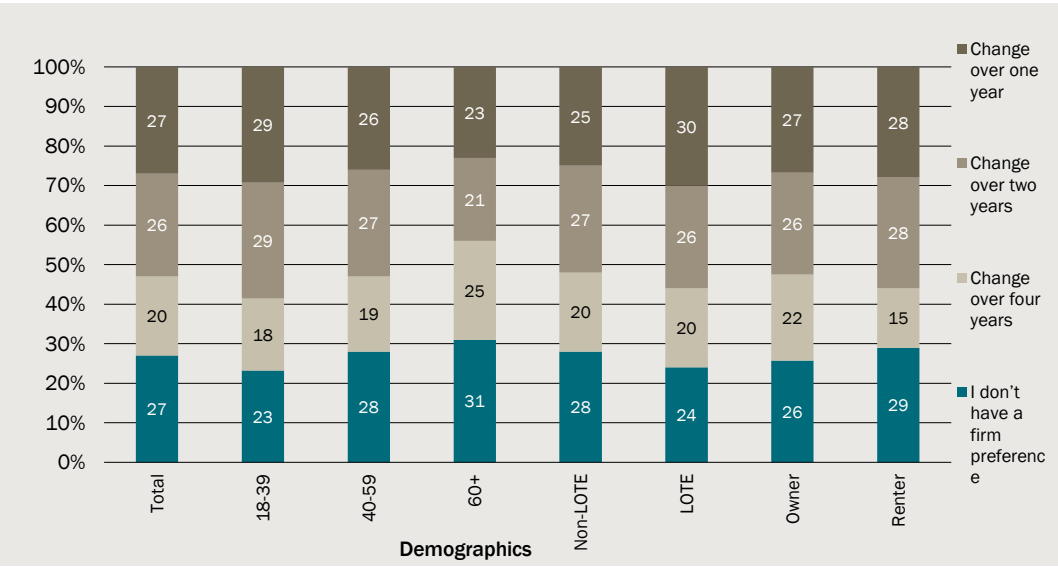
Similar to the forums, there was a slight preference for a gradual transition to any new pricing structure over 2 to 4 years whether it was an increase to the variable or fixed proportion (50% and 46% respectively).

8.20 Preference for gradual change if usage charge is increased and fixed charge decreased



Q18. If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be?
Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

8.21 Preference for gradual change if usage charge is decreased and fixed charge increased



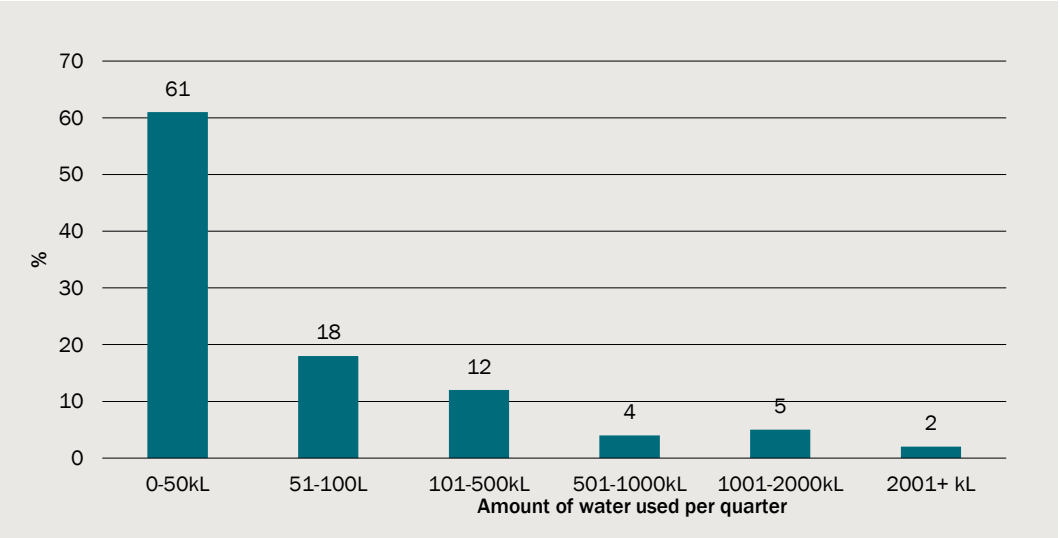
Q19. If Sydney Water were to decrease the usage charge and increase the fixed charge, how gradual should the change be?

Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

Non-residential survey

Respondents in the non-residential tariff survey were asked what their quarterly water use is, either by looking at their bill or estimating. The majority of respondents used up to 50kL a quarter (61%).

8.22 Indication of businesses' water usage

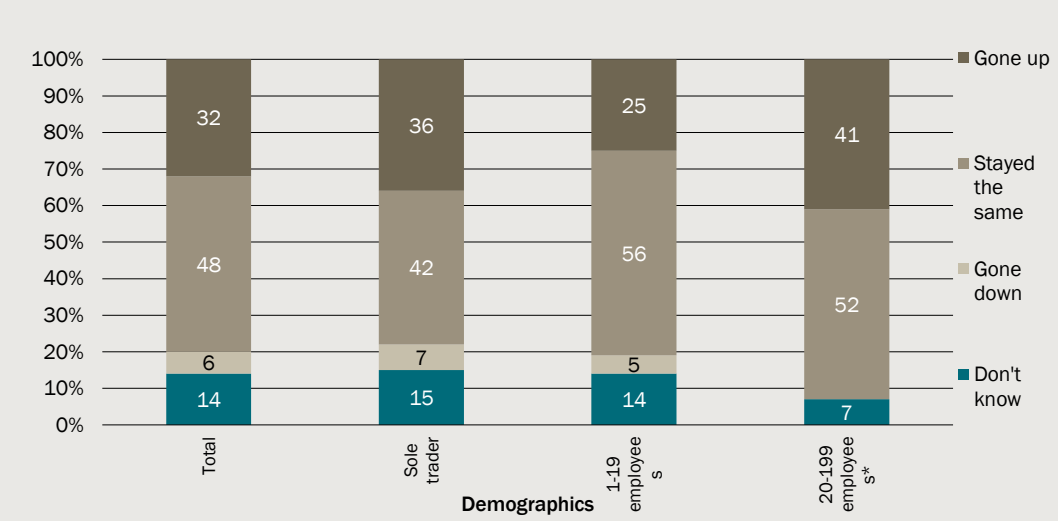


Q6. (Respondents with water bill) Please indicate the quarterly usage on the front of your bill.
Q7. (Respondents without water bill) Please give a rough estimate of the amount water that you use each quarter. The following table provides a guide of the water usage and meter sizes for different types of businesses which could help you provide and estimate.
The amount of water that my business uses each quarter is about:

Base: All respondents (n=250)

Respondents were asked whether they think their water bill has gone up, stayed the same or gone down over the last 12 months. Forty eight per cent (48%) believed that it has stayed the same while 32% believed that it has gone up.

8.23 Businesses' change in water usage over 12 months



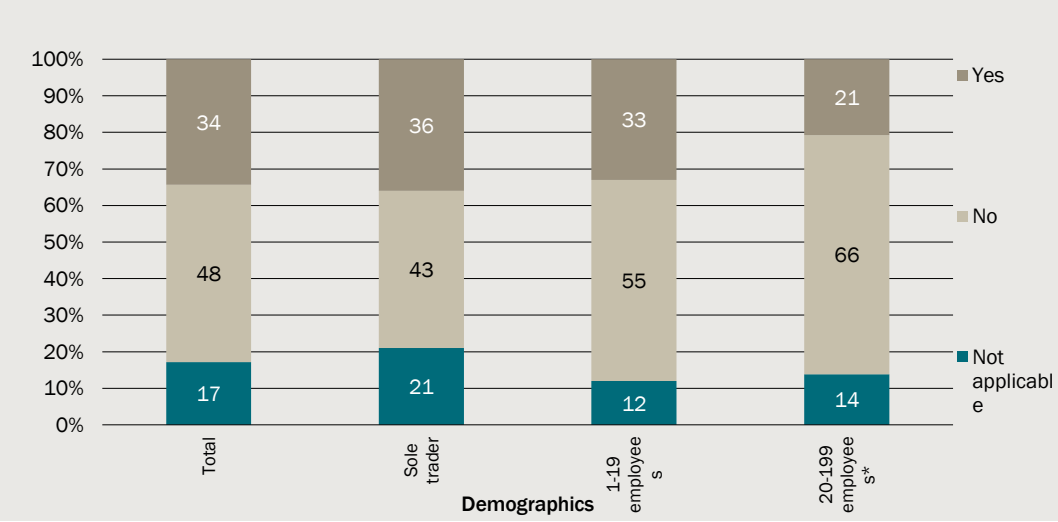
Q8. Compared to this time last year, do you think that your water bill has…?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

There were quite mixed views as to whether they monitored their usage and changed behaviours if their bill increases with 34% stating that they do and 48% stating that they do not.

8.24 Businesses' likelihood to change behaviour due to bill increases



Q9. Do you monitor your water usage and change your behaviour if your bill increases?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

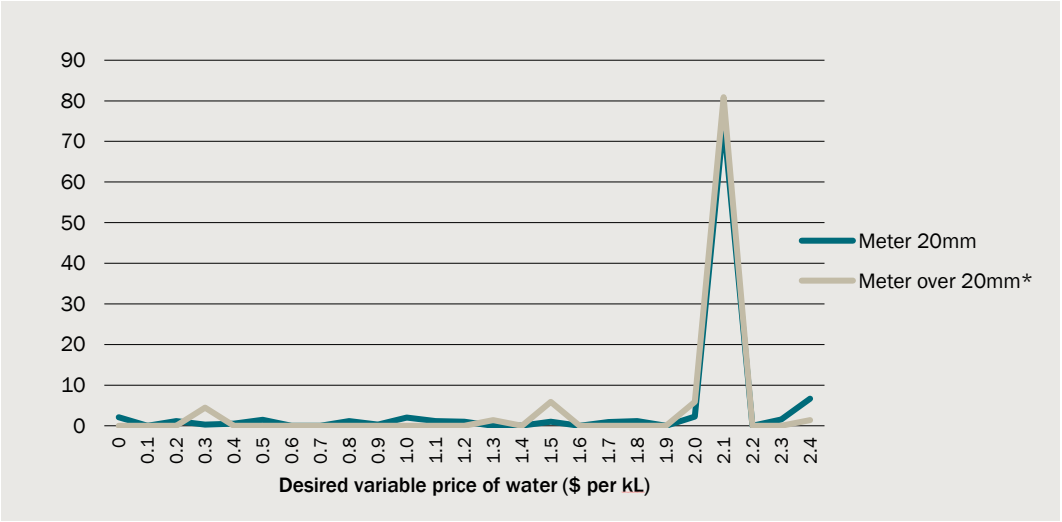
Respondents were provided with information about how Sydney Water charges businesses for water services (refer to questionnaire in Appendix O) and then asked to indicate whether the usage charge should be increased or decreased by moving a slider - moving the slider to the left increased the fixed charge and decreased the usage charge,

whilst moving the slider to the right decreased the fixed charge and increased the usage charge. They were also presented with a second slider that showed quarterly water consumption so they could use this to see what the bill impacts were with different levels of water consumption.

A reference was given that currently Sydney Water charges a water usage price of $2.08 per kilolitre of water used and that the fixed charge depends on meter size. They were informed that the fixed charge is $80.67 per property per quarter for a 20mm meter, $126.05 for a 50mm meter and $322.70 for an 80mm meter. A table was also provided as a guide for meter sizes for different types of businesses and they were asked to choose their businesses meter size. If they didn't know the meter size they were asked to leave it on the default of 20mm.

As with the citizens, there was a very strong preference for the proportions of fixed and variable components to remain as they currently are (usage at $2.08).

8.25 Preference for fixed or variable charges



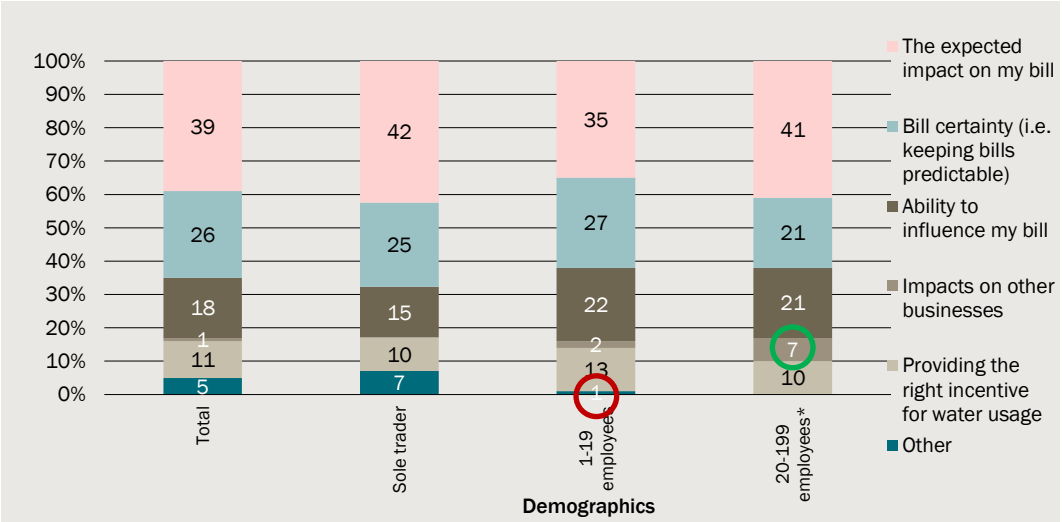
Q11. Please indicate your preferred balance between fixed and variable charges by moving the first 'slider' below.

Base: Meter 20mm (n=224); Meter over 20mm (n=26*)

* CAUTION: Small base size

The first and second reasons provided for their choice were varied, the main factor being the impact on their bill.

8.26 Most important consideration when choosing preference for fixed vs variable charges

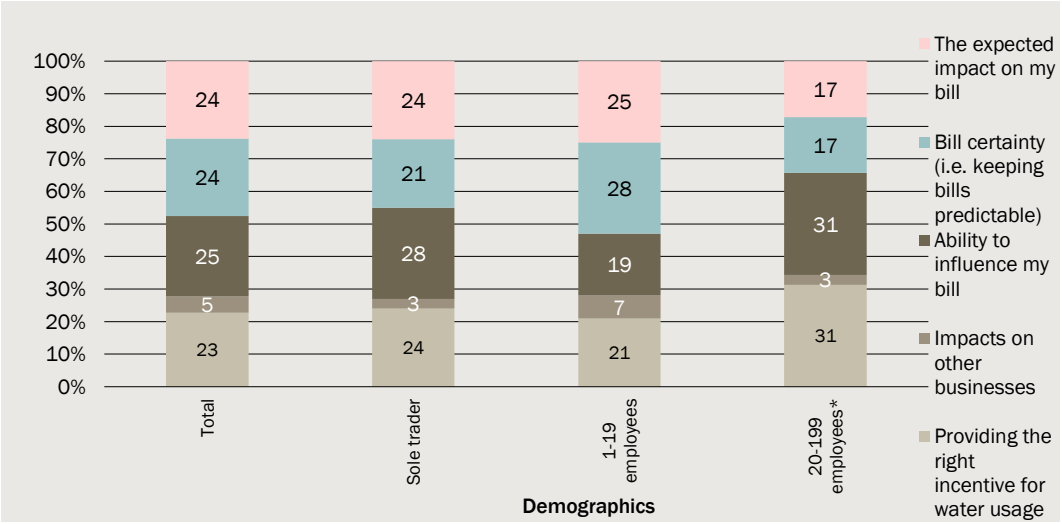


Q12. What was your most important consideration when choosing your preferred balance between fixed and variable charges?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

8.27 Second most important consideration when choosing preference for fixed vs variable charges



Q13. What was your second most important consideration when choosing your preferred balance between fixed and variable charges?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

Many business customers did not have a preference for the transition if the usage charge increased (36%), 24% wanted a sudden change and 40% would like to see changes occur over two to four years.

8.28 Preference for gradual change if usage charge is increased and fixed charge decreased

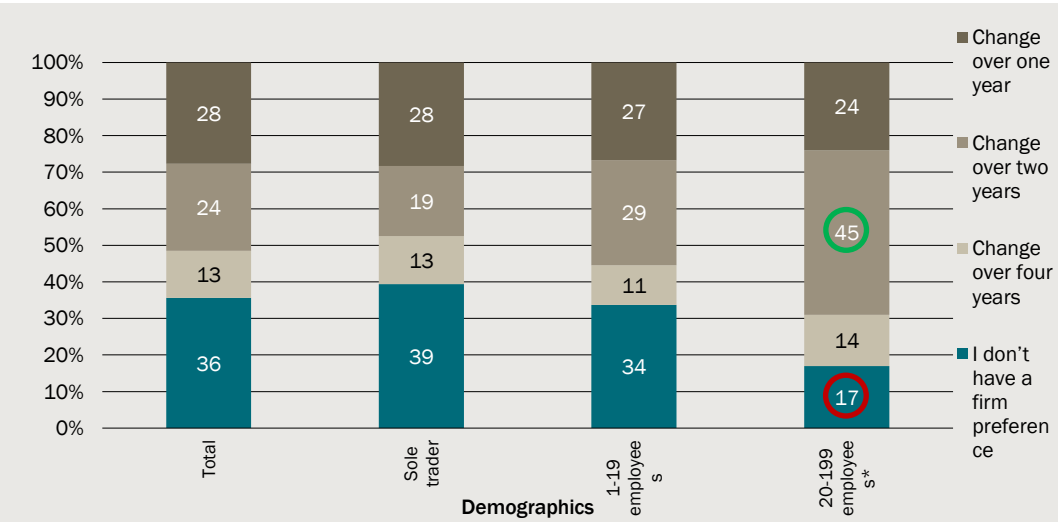
Q14. If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

Many business customers also did not have a preference for the transition if the usage charge decreased (36%) but 28% wanted to see a quicker change over one year.

8.29 Preference for gradual change if usage charge is decreased and fixed charge increased



Q15. If Sydney Water were to decrease the usage charge and increase the fixed charge, how gradual should the change be?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

9 Results: Wastewater pricing options

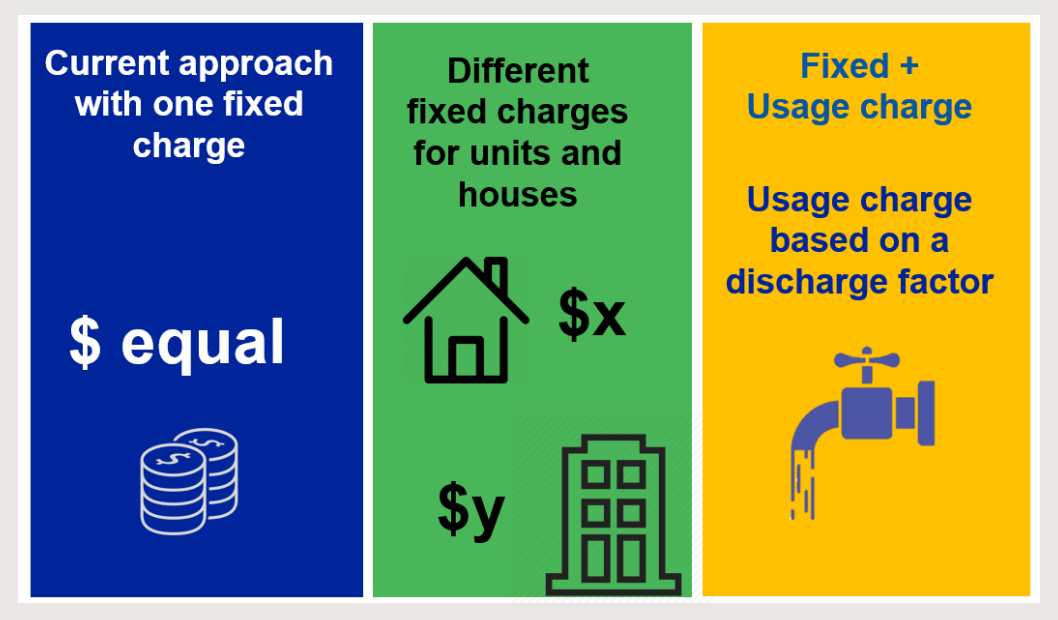
9.1 Key findings – wastewater pricing options

Wastewater pricing options
▪ Overall, the current approach with one fixed price was the preferred pricing structure for wastewater across all engagement components with citizens; – 54% at the forums and 43% in the residential survey preferred the current approach with a fixed charge only
▪ Although there was much discussion at the forums, there was an overall preference for fixed charges to remain the same across houses and apartments; – 63% at the forums and 39% in the residential survey believed that all dwellings should pay the same fixed charge
▪ At the forums, while there was interest and general support for a usage charge in principle, many disagreed with the use of a set discharge factor as it was not thought to be an accurate reflection of the actual volume of wastewater discharged from a premises;
▪ There were also concerns about how a usage charge would impact their bill and that it would make it more complex
▪ The small and medium business customers were asked to consider the proportion of fixed versus variable charges since they are already charged a variable component. In the groups they preferred a higher wastewater usage charge and lower fixed charge due to the fact that they believed that with a higher usage charge they could make some cost savings by using less water. In the tariff survey there was a strong propensity to choose the current proportions.
▪ The reverse was true for the significant business customers – they generally preferred the higher fixed and lower variable charge since this resulted in more substantial cost savings and a greater degree of predictability

Forums

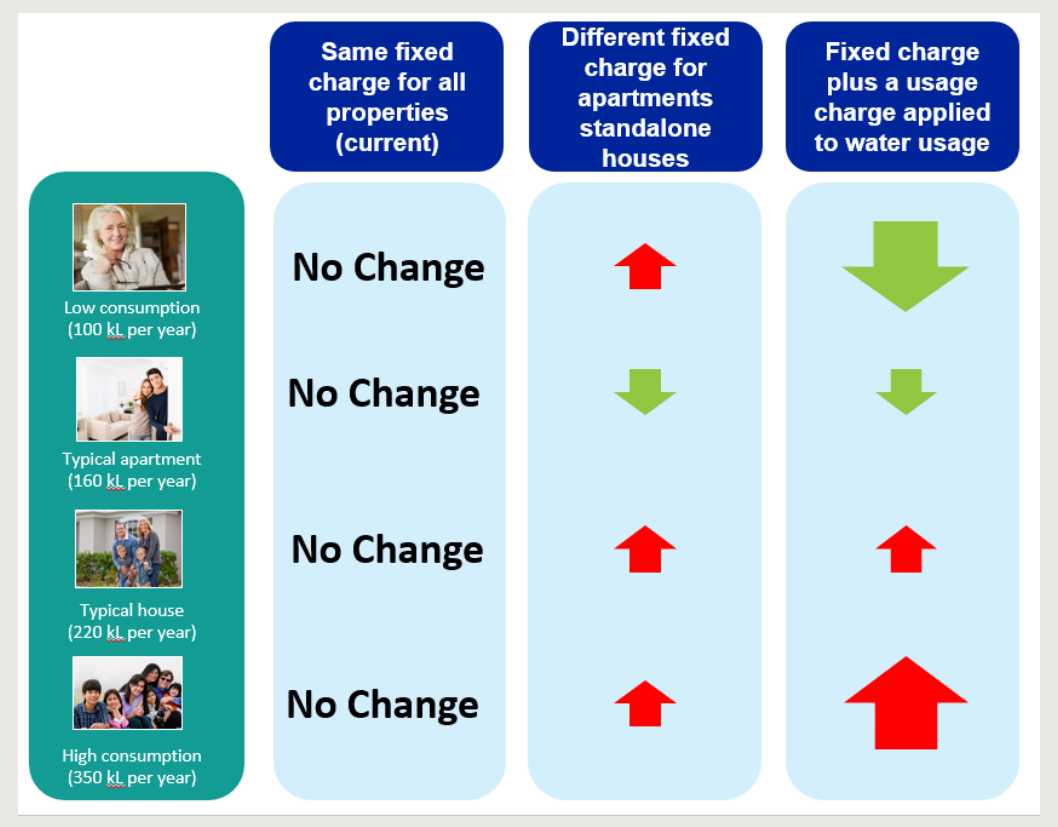
Wastewater pricing options were also explored at the forum. Participants were presented information in regards to the current wastewater tariff structure (all residents paying the same), and offered information on varying systems across Australia to consider. These included different fixed charges for houses and apartments and the option to introduce a variable component for usage based on a discharge factor (see Figure 9.2). As in the pricing structure section, forum participants were also given the indicative wastewater bill impacts on bill payers with various levels of water consumption (see Figure 9.3) (see handout 6a and 6b in Appendix H).

9.2 Options for wastewater charging



Source: Sydney Water

9.3 Indicative wastewater bill impacts



Source: Sydney Water

Preference for fixed or variable pricing

While the concept of variable pricing based on wastewater usage was well received, the strategy put forward to use a fixed discharge factor received mixed feedback. The concept of costing in for variable discharge was thought to be a good way to encourage the increased usage of greywater, however the proposed plan to implement a set discharge factor was not seen to encourage this behaviour by all.

Some participants identified that bringing in the usage charge would incentivise the usage of rainwater tanks and other systems for flushing toilets etc. because by lowering the total water usage then costs would be reduced on two fronts – decreasing total usage and therefore decreasing the amount the discharge factors can be applied to.

> *"Bringing in the usage charge would incentivise the usage of rainwater tanks and other systems for flushing toilets etc. Because if you are lowering the total water usage then you are reducing your costs on two fronts – your total usage is going down you have a lesser pot for them to charge you a discharge factor on." - Hurstville*

Implementing a variable charge was thought to be a 'fair' system that would benefit those using less water overall. More so, that would see a reduction in both their water usage and wastewater variable rate.

Others felt that a set discharge factor may disadvantage them, or was too potentially inaccurate and confusing and therefore dubbed the concept as being flawed, preferring the one fixed charge. In the absence of an accurate way of measuring wastewater discharge, many thought it best not to bring in a usage charge at all.

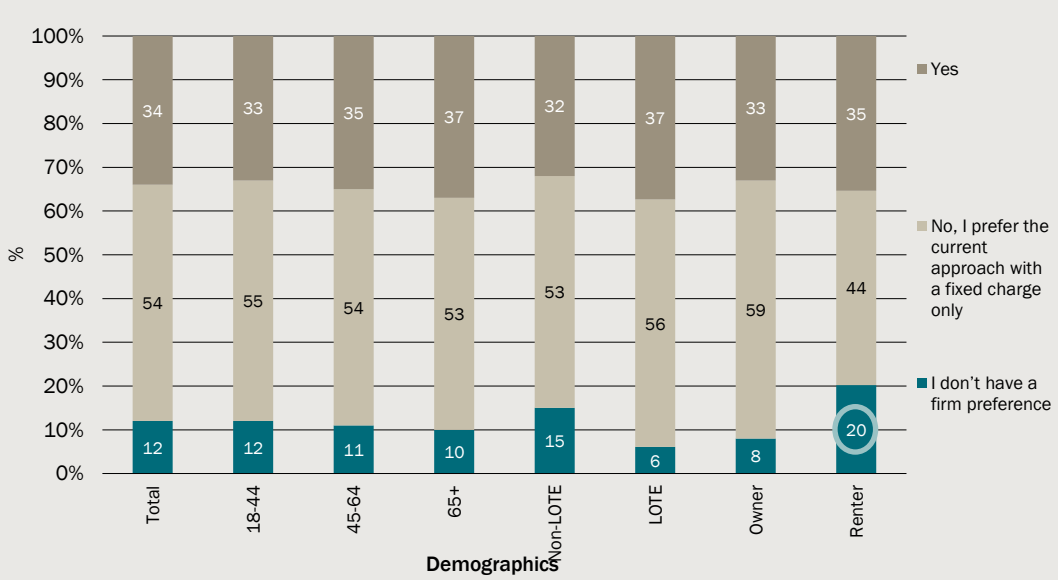
> *"I like the concept of measuring usage. But the technology and infrastructure just doesn't seem to be there to make more than a guestimate, and it would cost so much to make it fair [i.e. installing meters]." - Hornsby*

> *"I've already paid for the water usage once – I don't want to pay usage again. It's up to individuals [to recycle water]. If you're going to be careful, it's your choice to save money." - Campbelltown*

At the end of the section forum participants were asked if they wanted a variable wastewater component to be part of their bill, however more than half (54%) indicated they the current approach with a fixed charge only was preferential. Again, the participants of the Campbelltown forum were significantly more likely to indicate this as their preference (73%).

There was, however, still some interest in the variable component with just over a third (34%) showing they would like to have this included.

9.4 Preference for including a variable wastewater component



Do you think the wastewater part of your bill should include a variable component based on your water usage?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Differentiation between houses vs apartments

Forum participants were asked to discuss their preference for fixed pricing differentiation between houses and apartments. Most participants believed that those in houses and apartments should pay the same. Of those who thought there should be a different charge, there was also a divide between those who thought apartments should pay more and those who thought households should pay more.

For those who thought there should be no differentiation, while many felt that there was no point in 'changing something that was already working', there were also others who felt that there were too many things to consider in having a different price for houses and apartments and therefore a standardised price would end up being the fairest option in the end.

"As Sydney's housing mix moves towards more units, it seems to make sense to do something to benefit them… The more units you build, it is still working on the same infrastructure underneath the road." - Hornsby

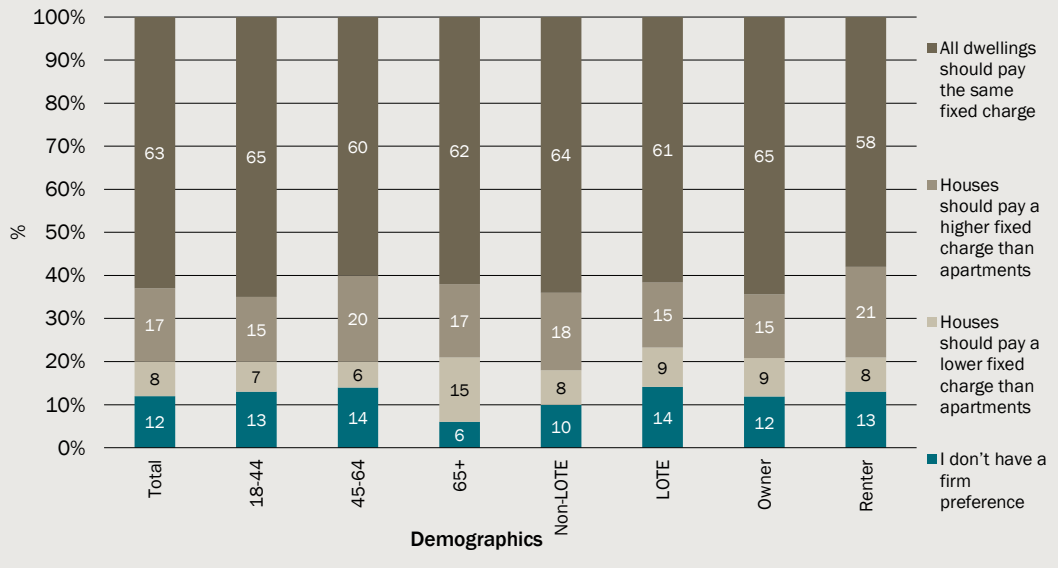
These contributing factors were also discussed amongst those who did want to see differentiation in pricing between houses and apartments. Some felt that apartments should be paying less because they were generally smaller with less occupants and that there was only one system taking away more wastewater than in a household. Others disagreed though, and felt that apartments created more wastewater because they did not usually have gardens so all water supplied went into the system. It was also felt that because Sydney was moving to increase density with more apartment living, that the sizes of apartments and occupancy was increasing to become just as big or bigger than a current household size.

Overall, there was an agreement that wastewater usage would depend on the number of people in a household and that perhaps a fixed standardised cost across houses and apartments would be the fairest option, in the absence of information on household size.

"It's maybe a bit flawed to assume apartments have less people than houses… some have more, some have less…" - Wollongong

Forum participants were asked to vote at the end of the section on their preference for differentiation in fixed pricing (see Figure 9.5). Overall, there was overwhelming support for all dwellings to be paying the same fixed charge (63%), which was significantly higher in Campbelltown (87%).

9.5 Preference for differentiation in fixed charges for houses and apartments



If the wastewater part of your bill remains fixed with no variable component, should the fixed amount be the same or apartments and houses?

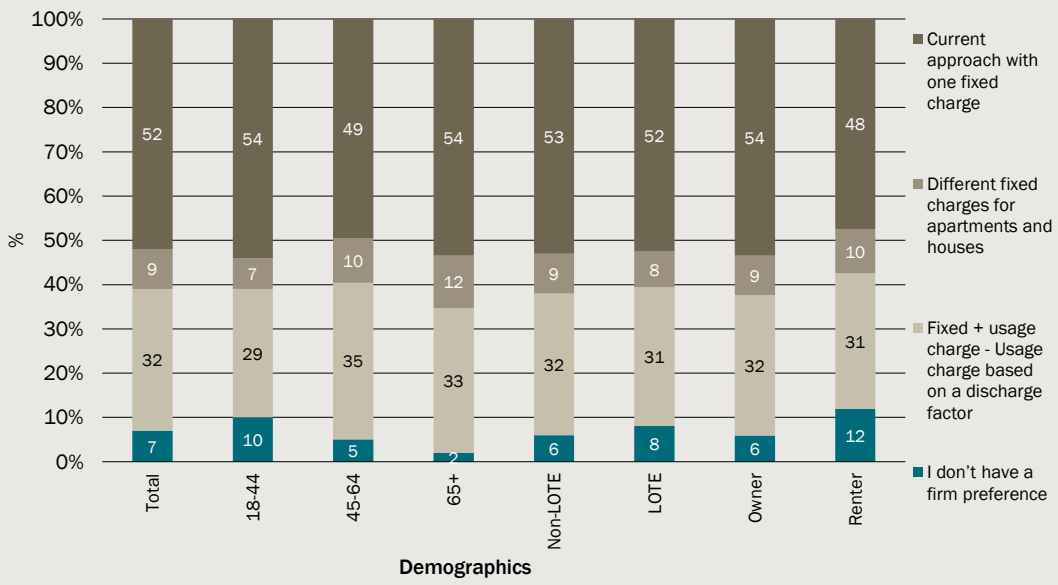
Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Overall preference

After deliberating over the various options during table discussions, forum participants were then asked to vote on which of the wastewater pricing scenarios they preferred

overall. As seen in previous graphs, the preference for the current approach with one fixed charge remained the overall favourite (52%), however there was still interest by just under a third (32%) for a variable component based on a discharge factor to be implemented.

9.6 Preferred wastewater pricing approach

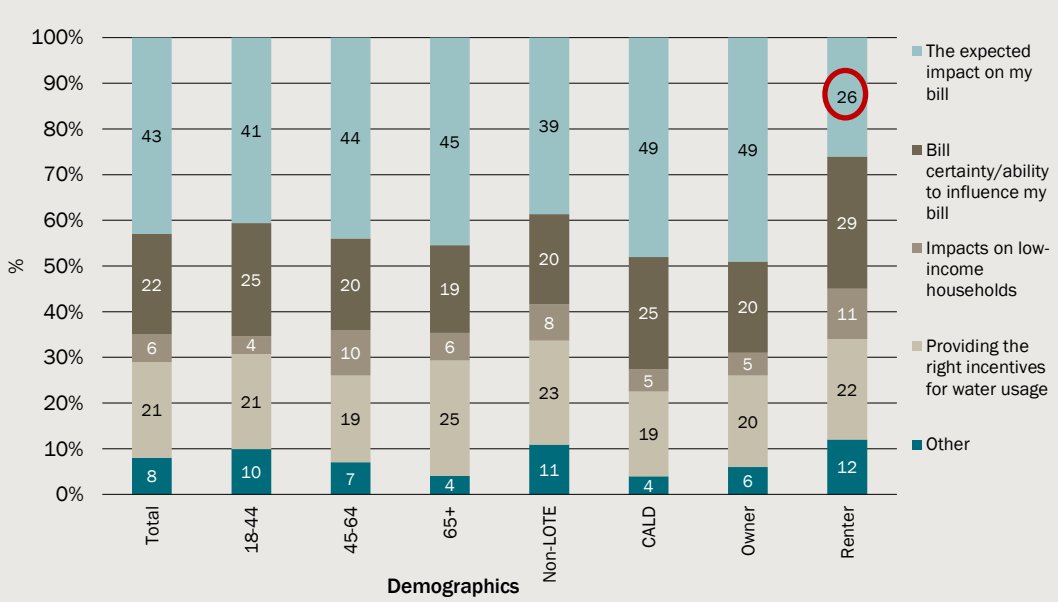


Overall, which wastewater pricing approach do you prefer?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

After selecting their preferred option, participants were also asked to indicate the main reason for their choice (see Figure 9.7). In this instance, as opposed to water usage pricing, there was a strong indication (43%) that the expected impact on personal bills was the driving consideration for selecting the wastewater charging scenario. Renters were less likely to select this option (26%). A further one in five also indicated bill certainty / the ability to influence personal bills, and providing the right incentives for water usage as important considerations (22% and 21% respectively).

9.7 Reason for preferred wastewater pricing approach



Overall, which wastewater pricing approach do you prefer?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Discussion groups

Most Vietnamese, Arabic, Hindi, Cantonese and Mandarin speaking participants believed that that there should be a variable component to wastewater charges that reflects the amount of water you use/discharge. However, the way that discharge could be measured was not discussed amongst these groups. Overall, participants believed that a variable component would be fairer for customers and encourage consumers to dispose of less water. However, some Vietnamese speaking participants were concerned that a variable component would create a disadvantage for larger families who consume/discharge more.

Some Greek participants would prefer current wastewater charges to remain (i.e. one fixed charge), while some others believed that a variable charge is preferable for smaller dwellings.

"I think it is better to remain a fixed charge, you know what you are doing, you know where you stand."(Greek speaking participant)

Most participants across the LOTE groups believed that if the wastewater part of the bill remains fixed there should be different fixed amounts for apartments (lower amount) and houses (higher amount) on the assumption that fewer people live in apartments compared to houses and therefore use/waste less water. Although some participants commented that some apartments can house large numbers of people.

> *"A lot of flats have people cramming into it, six people in a two-bedroom flat is normal. They would use the same amount of water whether in a flat or house (Mandarin speaking participant)*

LOTE participants were presented with the same three options for wastewater charging as in the forums: current approach with one fixed charge, different fixed charges for units and houses, and fixed plus usage charge. The majority of LOTE participants across the groups preferred the 'fixed plus usage charge' option – overall, participants believed that customers should pay for what they discharge. However, as mentioned there was less information presented in these groups by Sydney Water about how this could be accurately measured.

Those in the financial hardship groups preferred the current scenario as they preferred the bill certainty that comes with fixed charges. There was a concern about applying a discharge factor because of the potential assumptions and resulting inaccuracies involved. They also believed that houses and apartments should be charged the same fixed rate as this was thought to be fairest.

The small and medium business customers were asked slightly different questions than the residential participants, since there is already a variable component to their wastewater charge. Similar to the water pricing options, they were asked what the optimal proportion of fixed versus variable components should be on their bills. They were provided with handouts showing the current and three different scenarios with the different dollar amounts for varying meter sizes (see Figure 9.8) as well as demonstrating the general impact on different levels of water usage (see Figure 9.9) (see also Appendix K).

9.8 Proposed wastewater pricing scenarios (small and medium businesses)

	Current	Scenario A	Scenario B	Scenario C
Wastewater usage charge	$1.16 per kilolitre	$0.50 per kilolitre	$0.80 per kilolitre	$1.50 per kilolitre
Wastewater fixed charge – 20mm	$156 per quarter	$162 per quarter	$159 per quarter	$153 per quarter
Wastewater fixed charge – 50mm	$748 per quarter	$911 per quarter	$837 per quarter	$661 per quarter
Wastewater fixed charge – 80mm	$1847 per quarter	$2303 per quarter	$2097 per quarter	$1604 per quarter

Source: Sydney Water

9.9 Indicative wastewater bill impacts (small and medium businesses)

Quarterly wastewater bill (ex. water)	Current	Scenario A	Scenario B	Scenario C
Strata unit 20mm meter 25 kL/qtr 80% discharge factor	$159	$165	$163	$155
Low user 20mm meter 75 kL/qtr 85% discharge factor	$197	$187	$192	$201
Medium user 50mm meter 1675 kL/qtr 80% discharge factor	$2 277	$1 585	$1 900	$2 630
High user 80mm meter 6500 kL/qtr 70% discharge factor	$6 896	$4 325	$5 495	$8 214

Source: Sydney Water

The small and medium business customers overwhelmingly preferred Scenario C (a higher wastewater usage charge and lower fixed charge). This was due to the fact that most of the group participants were smaller businesses where the difference between the current and alternative scenarios was not great, and they believed that with a higher usage charge they could make some cost savings by using less water.

In-depth interviews

Views by the Customer Council representatives on this topic were similar to their views on the water pricing options. Their main concern was about how any changes would affect disadvantaged households. They wanted to see the statistics on how many people live alone in the Sydney Water area and how many are large families on low incomes to make a decision on which would suit the population as a whole.

Again, significant business customers were provided with tailored summary handouts showing the different dollar amounts for varying meter sizes (see Figure 9.10) as well as demonstrating the impact on different levels of water usage (see Figure 9.11) (see also Appendix M).

9.10 Proposed pricing options (significant business customers)

	Current	Scenario A	Scenario B	Scenario C
Wastewater usage charge	$1.16 per kilolitre	$0.50 per kilolitre	$0.80 per kilolitre	$1.50 per kilolitre
Wastewater fixed charge 50mm	$748 per quarter	$911 per quarter	$837 per quarter	$661 per quarter
80mm	$1 847 per quarter	$2 303 per quarter	$2 097 per quarter	$1 604 per quarter
100mm	$2 861 per quarter	$3 588 per quarter	$3 260 per quarter	$2 474 per quarter

Source: Sydney Water

9.11 Impact of proposed pricing options on different meter sizes (significant business customers)

Quarterly wastewater bill (ex. water)	Current	Scenario A	Scenario B	Scenario C
50mm meter, 2 500 kL/qtr, D. factor 60%	$2 282	$1 436	$1 821	$2 715
50mm meter, 25 000 kL/qtr, D. Factor 95%	$28 408	$12 962	$19 983	$36 361
80mm meter, 20 000 kL/qtr, D.Factor 45%	$11 480	$5 818	$8 393	$14 393
100mm meter, 30 000 kL/qtr, D. Factor 100%	$38 413	$19 576	$28 141	$48 100

Source: Sydney Water

Reactions by significant business customers were similar for wastewater as they were for water.

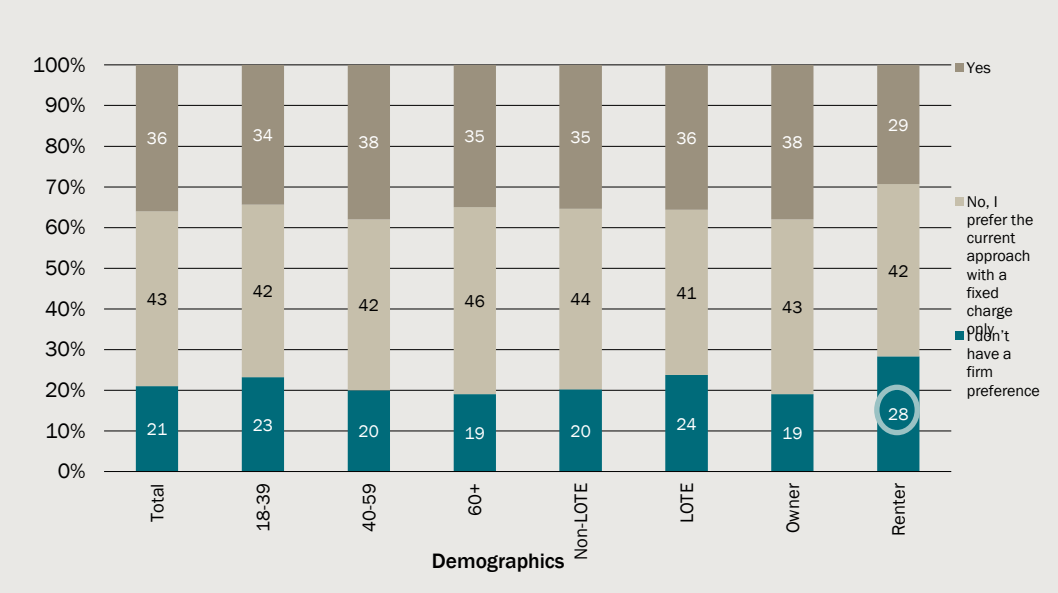
Scenario A was selected as the preferred option due to cost savings.

"We just want the lowest price."
(Significant business customer)

Residential tariff survey

Similar to the forums, there was some interest in a usage charge for wastewater with 36% stating that the wastewater part of the bill should include a variable component based on the volume of wastewater discharged from people's houses. However, the majority preferred the current approach with just a fixed charge (43%).

9.12 Preference for a variable component to the included in the wastewater charge

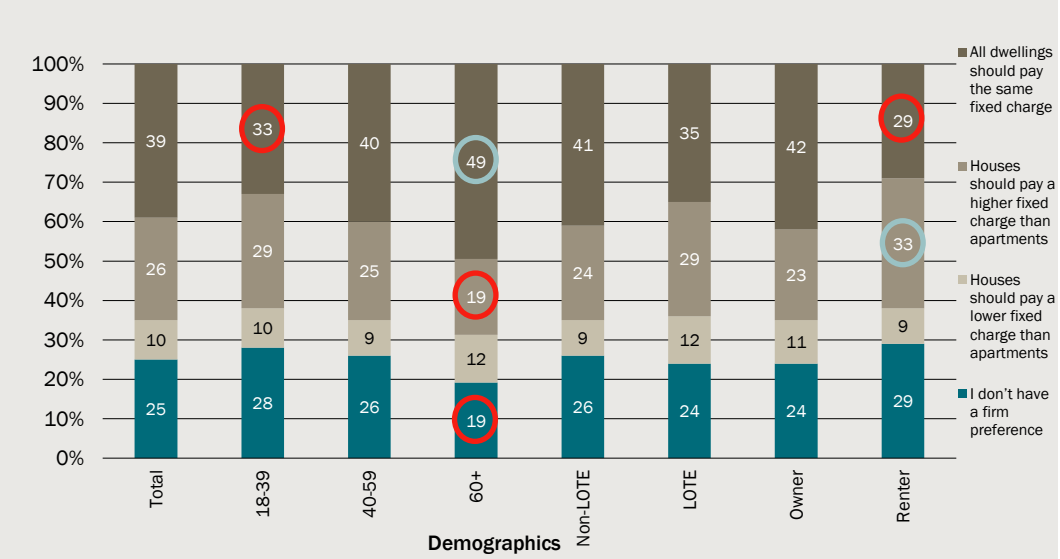


Q20. Do you think the wastewater part of your bill should include a variable component based on the volume of wastewater discharged from your house?

Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

Similar to the forums, the highest proportion believed that there should be the same fixed charge for houses and apartments (39%), although just over a quarter believed that houses should pay more than apartments (26%). Without the discussion about the issue, a higher proportion in the survey did not have a firm preference (25%) than at the forums.

9.13 Preference for houses and apartments to have the same fixed charges

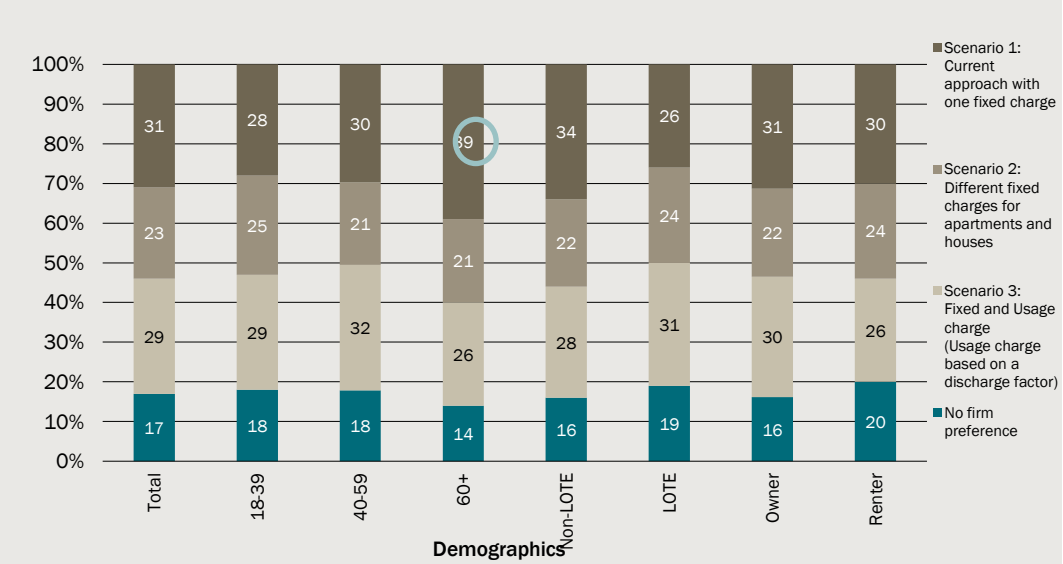


Q21. If the wastewater part of your bill remains fixed with no variable component, should the fixed amount be the same for apartments and houses?

Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

Similar to the forums, the highest proportion believed that the current approach with one fixed charge is best (31%). However, in the absence of the discussion around the issue the proportion was smaller than in the forums. A similar proportion to the forums believed that a usage charge should be implemented (29%). There was a substantial proportion who believed that there should be a fixed charge but that those in houses should pay more than those in apartments (23%), more so than in the forums.

9.14 Preference for proposed wastewater pricing options

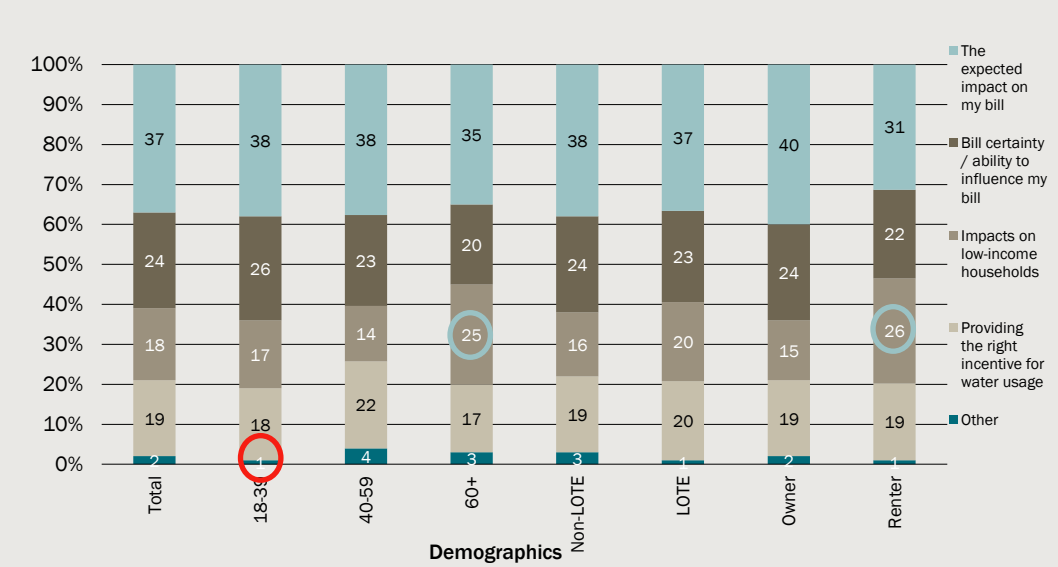


Q22. Overall, which wastewater pricing approach do you prefer?

Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

Similar to the forums, the expected impact on the bill was the main reason provided for their preference (37%).

9.15 Considerations when choosing preference for wastewater charges



Q23. What was your most important consideration when choosing your preferred approach?

Base: All respondents (n=1003); 18-39 (n=435); 40-59 (n=327); 60+ (n=241); Non-LOTE (n=735); LOTE (n=268); Owner (n=750); Renter (n=253)

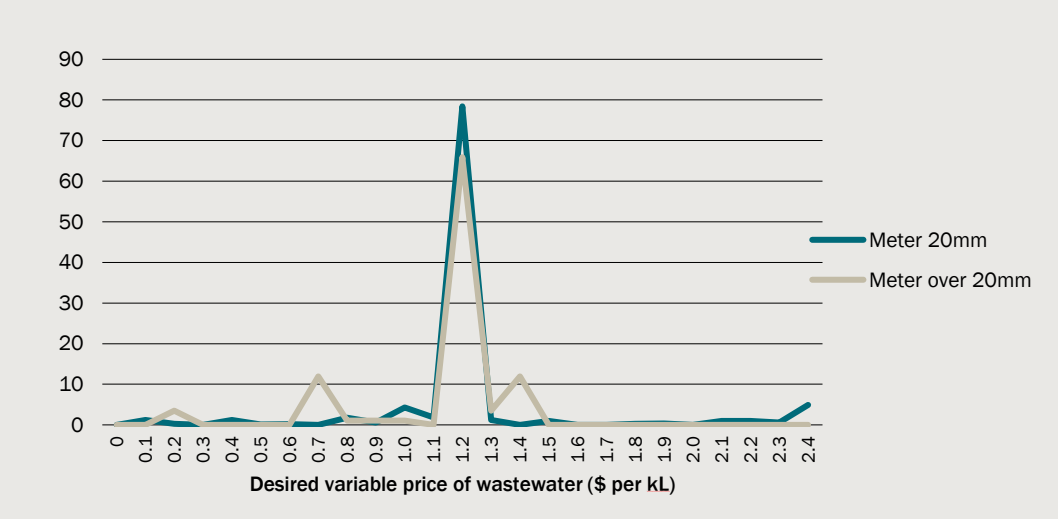
Non-residential survey

Respondents were provided with information about how Sydney Water charges businesses for wastewater services (refer to questionnaire in Appendix O) and then asked to indicate their preferred balance between fixed and usage charges by moving a slider - moving the slider to the left increased the fixed charge and decreased the usage charge, whilst moving the slider to the right decreased the fixed charge and increased the usage charge.

A reference was given that currently Sydney Water charges a wastewater usage price of $1.16 per kilolitre of wastewater discharged to the sewer and that the fixed charge depends on meter size and discharge factor. They were informed that the fixed charge is $156 per business per quarter for a 20mm meter, $748 for a 50mm meter and $1,847 for an 80mm meter. They were asked to select their meter size and discharge factor. If they didn't know the meter size they were asked to leave it on the default of 20mm and if they didn't know the discharge factor they were asked to leave it on the default of 78%. Almost all of the respondents left the discharge factor on 78%. Thirty increased the meter size to above 20mm.

There was a very strong preference for the proportions of fixed and variable components to remain as they currently are (usage at $1.16 per kilolitre).

9.16 Preference for fixed or variable wastewater charges

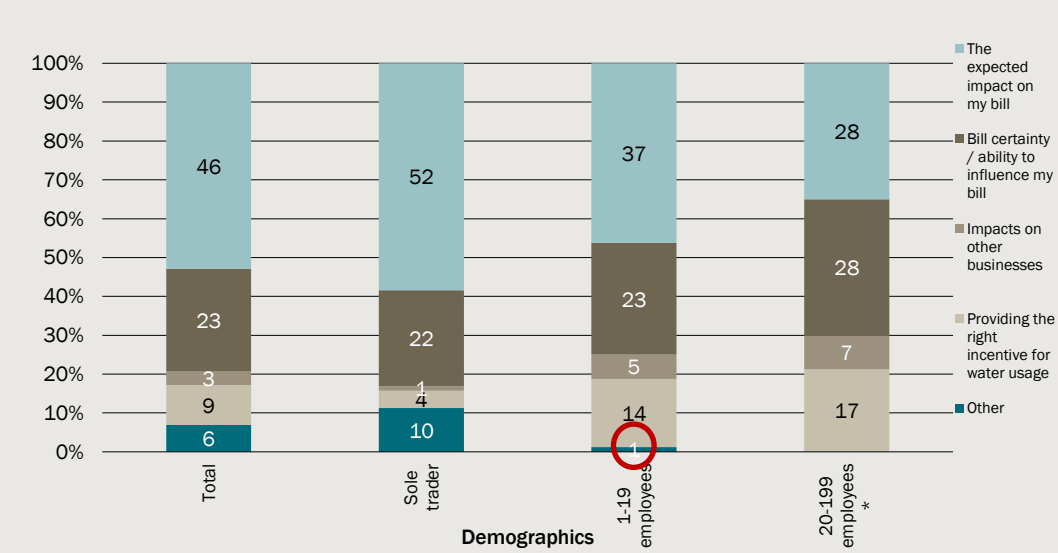


Q11. Please indicate your preferred balance between fixed and variable charges by moving the first 'slider' below.

Base: Meter 20mm (n=220); Meter over 20mm (n=30)

Again, the reasons provided for their choice were varied but for almost half (46%) the main factor was the impact on their bill.

9.17 Most important consideration when choosing preference for fixed vs variable wastewater charges



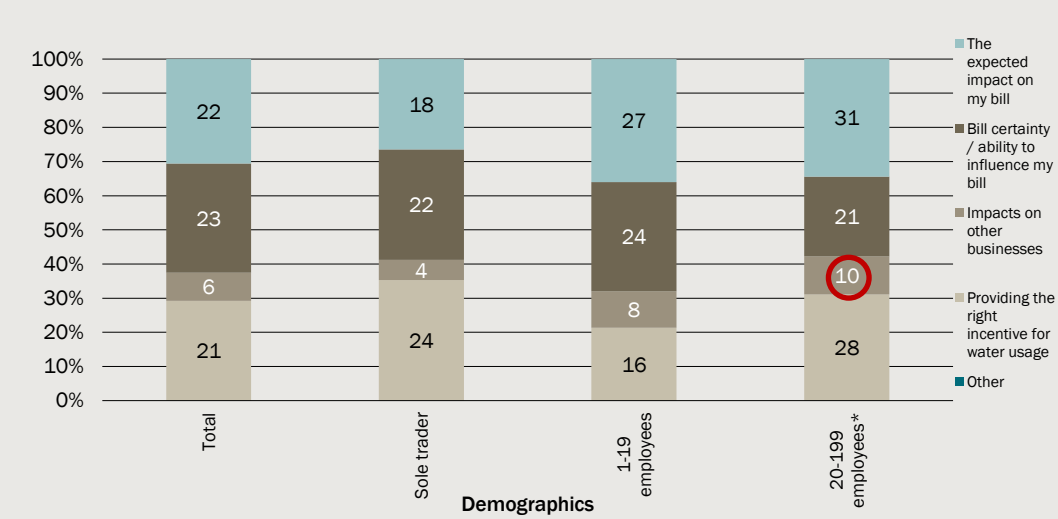
Q17. What was your most <u>important consideration</u> when choosing your preferred balance between fixed and variable charges?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

The second reason for the choice was also varied with relatively equal numbers choosing the expected bill impact (22%), bill certainty/ability to influence the bill (23%) and providing the right incentive for water usage (21%).

9.18 Second most important consideration when choosing preference for fixed vs variable wastewater charges



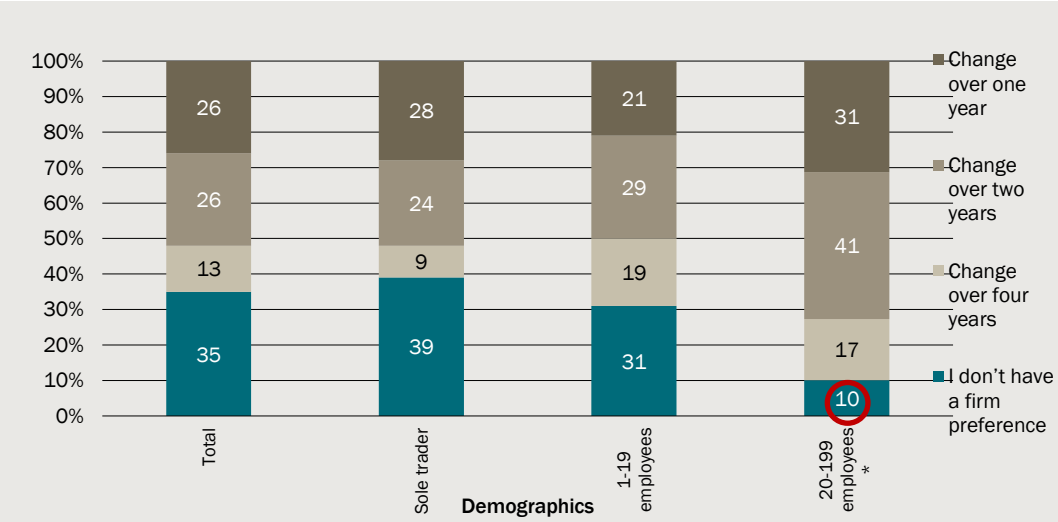
Q18. What was your second most important consideration when choosing your preferred balance between fixed and variable charges?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

Although many did not have a preference (35%) if the wastewater charge is increased, 26% wanted a quick change over one year and 26% wanted a change over two years.

9.19 Preference for gradual change if wastewater usage charge is increased and fixed charge decreased



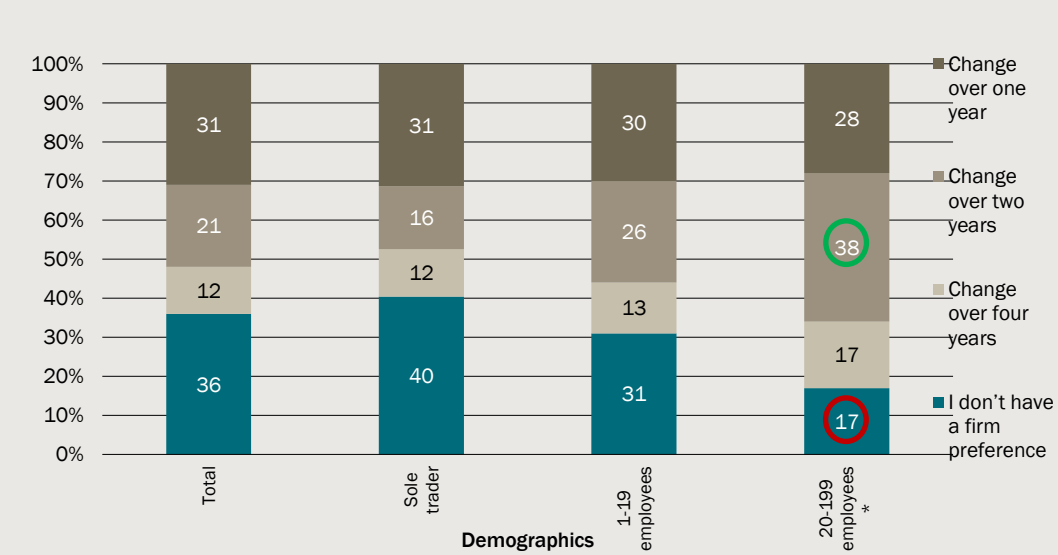
Q19. If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

It was a similar response if the wastewater usage charge is decreased with 36% not having a preference and 31% wanting a quick change over a year.

9.20 Preference for gradual change if wastewater usage charge is decreased and fixed charge increased



Q20. If Sydney Water were to decrease the usage charge and increase the fixed charge, how gradual should the change be?

Base: All respondents (n=250); Sole trader (n=67); 1-19 employees (n=154); 20-199 employees (n=29*)

* CAUTION: Small base size

10 Results: Rainwater in the wastewater system

10.1 Key findings – rainwater in the wastewater system

Rainwater in the wastewater system
▪ There was overwhelming support for Sydney Water to fix the problem of rainwater and groundwater in the wastewater system at the source, rather than continue to just build bigger pipes, storages and overflows
▪ Forum participants felt that the issue was important and would continue to worsen over time if it was not addressed directly
▪ Fixing the issue at the source was also presented as the more cost effective solution of the two options
▪ In terms of who should pay, because the cost to the individual was seen to be so significant (potentially around $13,000) it was thought to be fairest to spread it across the customer base (77% chose this option at the forums)
▪ However, it was felt that those who had knowingly installed illegal stormwater connections should still be penalised
▪ Small and medium business participants were not as consensual in their opinions with a mix between all options preferred.

Source: CIE/Woolcott Research

Forums

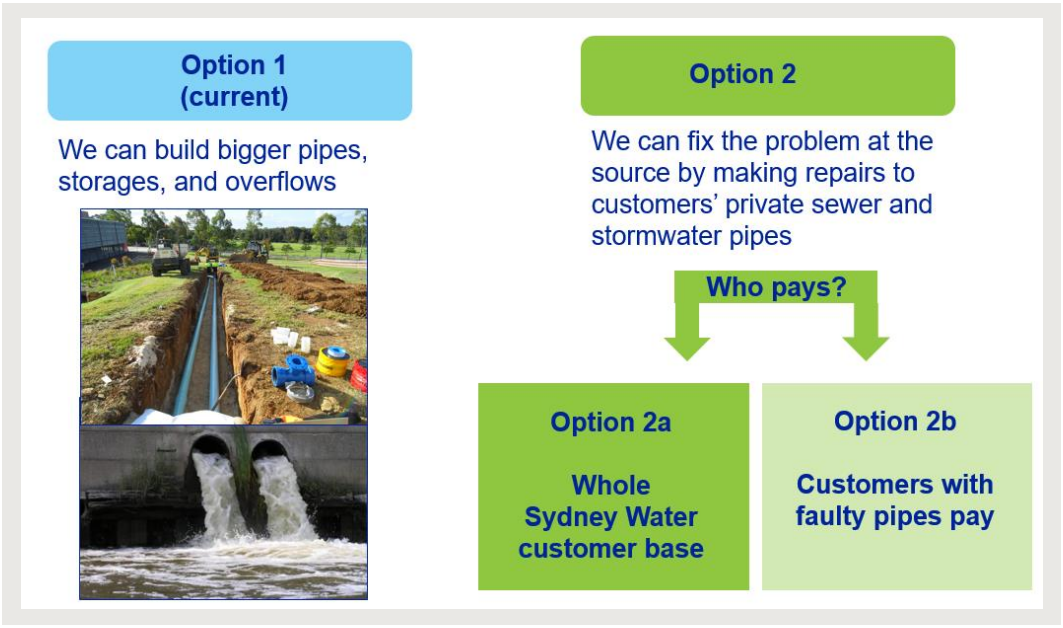
Overarching perceptions

After a presentation from Sydney Water outlining the issues faced regarding rainwater in the wastewater system, participants felt that it was an important issue that needed to be addressed. Some participants openly reported illegal stormwater connections in their neighbourhood and some indicated that they had problems with old piping on their property or someone they knew had. While it was thought to be a large issue to tackle, it was deemed a necessary and important task that Sydney Water should take on.

Reactions to proposed scenarios

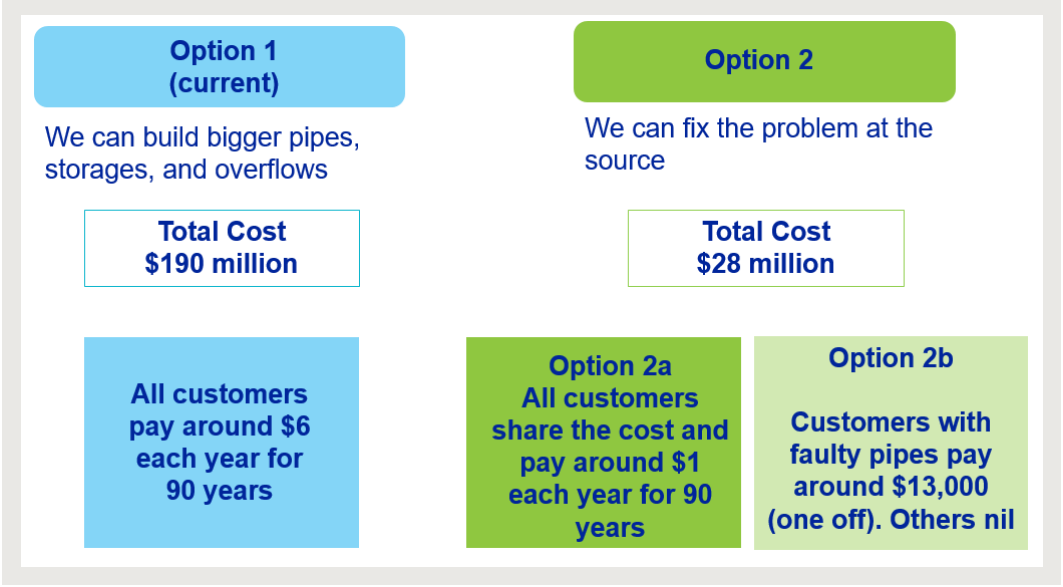
When first presented with the three scenarios for combatting rainwater in the wastewater system (see Figure 10.2), there were many who felt that a 'user pays' option was best. However, when followed with the costs associated with the three solutions (see Figure 10.3), there was a strong change of preference towards a shared solution (see handout 7 in Appendix J).

10.2 Proposed approaches to solving rainwater in the wastewater system



Source: Sydney Water

10.3 Costs associated with proposed approaches to solving rainwater in the wastewater system



Source: Sydney Water

Scenario 1 Building bigger pipes, storages and overflows

It was recognised that Sydney Water implementing this option was simply a 'band aid solution' and not fixing the real issue. It was well understood that this option would continue to be used for the growing population of Sydney, however it was not felt to be the best solution to an issue that would continue to worsen over time if it was not addressed directly.

"At the moment they don't seem to have any capacity to fix things on other people's properties and have to rely on band aid solutions." - Wollongong

Scenario 2 Fixing the problem at the source – all customers share the cost

Once the costs associated with each presented solution were given, there was a resounding overall preference for this scenario. Not only was Option 2 the more cost effective of the two solutions, Option 2a was also felt to be such a small denomination to pay in order to fix a bigger issue.

"If SW fixes it then you know you would get a good job done rather than plumber who may do a bad job and overcharge you." - Hornsby

Many felt that by choosing this scenario they would be giving the investigative powers to Sydney Water in order to identify properties with an issue. The idea that they did not have to 'deal with' the problem themselves was comforting to many.

However, there was a strong suggestion that those with illegal stormwater systems should still be penalised in some way. It was noted that it may be difficult to identify if the current homeowner was at fault for an illegal system, or a previous owner, and many stated that they would not want to be out of pocket for someone else's shortcomings in this regard.

Scenario 2b Fixing the problem at the source – customers with faulty pipes pay

While it was agreed that the source of the problem should be fixed (Option 2 overall), the cost of around $13,000 for an individual customer to pay in Option 2b was felt to be unrealistic for many. Some participants had themselves already been through this process or knew someone that had done so, and relayed the huge financial impact it had had, especially as an unexpected cost or when purchasing a new home.

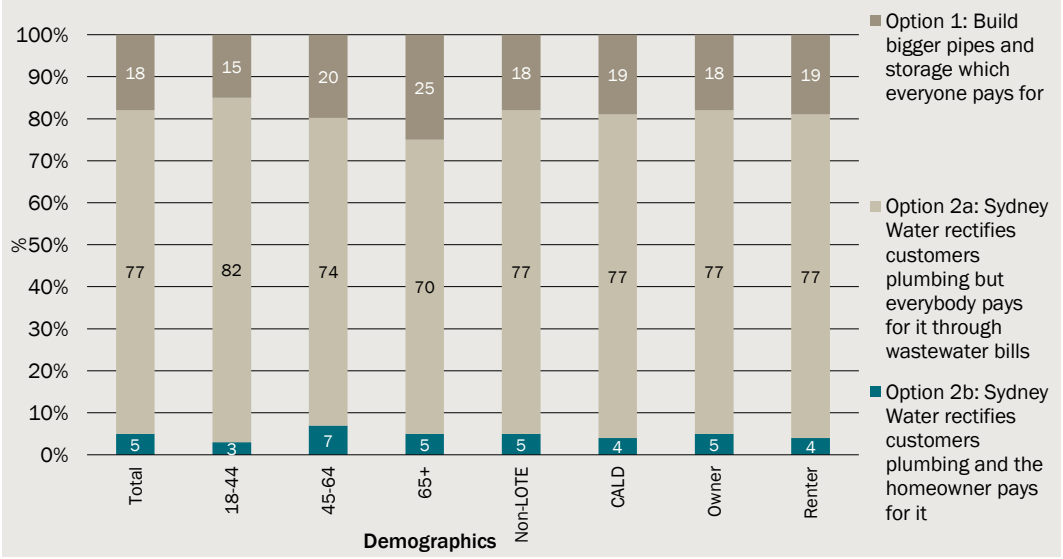
"It would be a legal nightmare trying to get approval to fix peoples private property, some may also try to fix it themselves and make the problem worse." - Parramatta

Forum participants also identified that if this option was to be chosen, there would be no real way for it to be regulated and therefore the problem itself would not be fixed. Participants felt that those who could potentially have a problem could simply refuse

inspection or would not investigate at all, so that they would not take a chance in having to pay such a hefty sum for repairs.

At the end of the session forum participants were asked to vote on which was their preferred option for handling rainwater in the wastewater system. More than three quarters (77% in total) indicated a preference for Option 2a: that Sydney Water seeks to rectify problems in customers' plumbing and spread the cost across the customer base. This was significantly higher amongst the 18-24 year old demographic (87%).

10.4 Preferred solution to rainwater getting into the wastewater system



What is your preferred approach to dealing with ground water and stormwater inflow into the sewerage network?

Base: All respondents n=529; 18-24 (n=74), 25-44 (n=171), 45-64 (n=171), 65+ (n=113), Non-LOTE (n=412), LOTE (n=117), Owner (n=386), Renter (n=139)

Discussion groups

Participants in the groups were presented with the same options (1, 2a and 2b) as in the forums.

Overall, participants across the Hindi, Vietnamese, Greek and Arabic groups preferred Option 2a as they thought this was fairest. In this option customers are not contributing much towards the repair costs to fix the problem at the source, and government investment is less than the current approach of building bigger pipes, storages and overflows.

Participants in the Cantonese and Mandarin speaking groups, and some participants in the Hindi speaking groups thought that the affected household should be responsible for paying the costs to fix the problem of faulty wastewater pipes and take personal

"Somebody should be accountable – those who have done things illegally for example and will create more problems in the future" (Hindi speaking group)

responsibility, rather than the cost being shared across all customers (Option 2b).

Hindi speaking participants suggested a gradual change where for the next five years all customers continue to share the cost of repairs (Option 2a) and after this time Sydney Water moves to Option 2b where customers with faulty pipes bear the costs for repairs.

However, it was believed that there should be some investment into building bigger pipes too as this approach will be required in the long run anyway (Option 1). Some thought that this current approach of building bigger pipes, storages and overflows is the best long-term solution amongst all options presented. However, the downside of option 1 is the construction impacts and damage to roads due to the digging required for the bigger pipes, storages and overflows, as well as the length of time it would take to carry out the works on this scale.

The financial hardship groups believed that Option 2a was the best option as it was only $1 per household and would fix the problem, with some also putting forward the proposal of a mix of Option 1 and 2a. However, it was also thought that those with illegal stormwater connections should be fined.

"$1 is nothing (Option 2a)" (financial hardship participant)

"They should do both Option 1 and 2a and we should pay $7 a year more." small and medium business participant

The small and medium business participants were largely undecided on the best approach. A slight majority favoured Option 2a as $1 was not a great amount and it seemed fair to spread the cost. Some believed that a mix of Options 1 and 2a was the best approach. This would solve the current problem at the source and also ensure that the wastewater network is not put under undue strain in the future. However others believed that people should be responsible for their own problems and that Option 2b was appropriate.

In-depth interviews

The Customer Council representatives thought that Option 2a was the fairest for all as it was cheapest and did not have the potentially significant individual bill impact that Option 2b would have. There was also a concern that those living in older homes were most at risk of having faulty pipes and were least able to afford to fix it.

"There is a really great risk that people with faulty pipes live in older homes and are disadvantaged." Customer Council representative

However, similarly to the residential customers they suggested that if someone had deliberately connected illegal stormwater connections then they should be fined.

A Deliberative forum agenda

Deliberative Agenda Structure Phase 2

Project:	Sydney Water CIPA Phase 2				
Facilitator		**TABLE NO.**			
Event:	Deliberative forum				
Details:					
Dates:	2018	**Time:**	5.30pm-9.00pm	**Duration:**	3.5 hours
Forum outcomes:	• Confirmation of the customer priorities • Views on the acceptability of proposed changes to rebates • Pricing considerations • Preferences for the structure of water tariffs, including in relation to the balance between fixed and variable charges • Preferences for the structure of wastewater tariffs, including in relation to potential variable charges residential customers • Views on the acceptability of source control options				

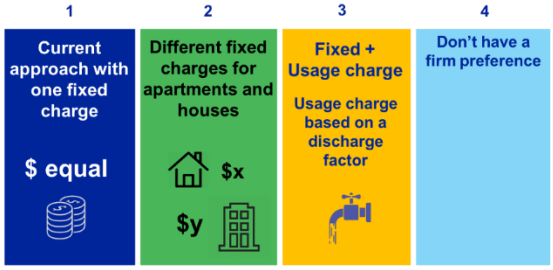
Time	Session details
5.00pm onwards	**Pre-forum – Room set up** ▪ Organise tables and chairs, check audio visual equipment and set up, check catering, set up registration desk
5.15-5.30pm	**Meet and greet** ▪ Sign in, provide name labels, direct to tables (all participants will have allocated tables - 8 tables)
5.30-5.32pm	**Plenary: Welcome** ▪ Woolcott Research Lead Facilitator to welcome and thank participants for coming (back). ▪ Acknowledgement to Country ▪ Woolcott Research Lead Facilitator to give overview of forum agenda and approach, the key sessions, guidelines and housekeeping. Location of toilets and evacuation in emergency. ▪ Introduce opening speaker
5.35-5.45pm	**Presentation: Welcome (back) and introduction to SW** ▪ Recap on role of SW and about the organisation ▪ Why we are here ▪ Recap of engagement plan ▪ Objectives of phase 2 ▪ What we have heard so far from Phase 1

5.45-5.55pm	**Table discussion: Reactions to what heard so far** ▪ Go round and ask them to introduce – first name and how many people live in their household ▪ Reactions to what they heard. Does it align with what they remember/what they think? GIVE OUT HANDOUT 1 ▪ Do the six 'values' shown on the slide/handout cover the most important outcomes you want from Sydney Water? ▪ Is there an important outcome that doesn't fit into these six priorities that is missing?
5.55-6.00pm	**Plenary: Keypad polling** *Lead facilitator to introduce keypads and do some warm up questions. Results shown on screen.* **PRACTICE QUESTION:** **Q. Where would you most like to go on holiday?** 1 Hawaii 2 Uluru 3 Europe 4 Surfers Paradise 5 North Pole **REAL QUESTIONS:** **Q. Do the customer priorities summarised in the presentation from the last forums reflect your views?** 1 Yes, fully 2 Yes, partially 3 No
6.00pm-6.05pm	**Presentation: Rebates** ▪ SW's proposed revisions to rebates in response to what customers told us.
6.05-6.20pm	**Table discussion: Rebates** ▪ GO THROUGH EACH REBATE CHANGE (HANDOUT 2) ▪ Reactions to SW proposed revisions to rebates – go through each one – is it acceptable? Why/why not? ▪ Overall, do you consider the changes to be an improvement or not?
6.20-6.30pm	**Plenary: Keypad polling** **Q. Overall, do you think the proposed changes are an improvement on the previous set of rebates?** 1 Yes, the changes are an improvement 2 No, the rebates would be no better or worse than they were before 3 No, the rebates would be worse than they were before 4 Not sure **Q. To what extent do you support the changes to the rebates as an overall package?** 1 Support strongly 2 Support slightly 3 Don't really support 4 Do not support at all **Q. In the context of the overall package do you support the changes to the rebates for 'boil water alerts'?** 1 Support strongly 2 Support slightly

	3 Don't really support 4 Do not support at all **Q. In the context of the overall package do you support the changes to the rebates for wastewater overflows?** 5 Support strongly 6 Support slightly 7 Don't really support 8 Do not support at all **Q. In the context of the overall package do you support the changes to the rebates for planned interruptions?** 1 Support strongly 2 Support slightly 3 Don't really support 4 Do not support at all **Q. In the context of the overall package do you support the changes to the rebates for unplanned interruptions?** 1 Support strongly 2 Support slightly 3 Don't really support 4 Do not support at all **Q. In the context of the overall package do you support the changes to the rebates for low water pressure incidents?** 1 Support strongly 2 Support slightly 3 Don't really support 4 Do not support at all **Q. In the context of the overall package do you support the changes to the rebates for discoloured water?** 1 Support strongly 2 Support slightly 3 Don't really support 4 Do not support at all
6.30- 6.55pm	**DINNER**
6.55-7.00pm	**Presentation: Pricing** ▪ Now want to move onto pricing and tariffs… ▪ Explain what a residential bill looks like ▪ Explain fixed and variable pricing ▪ Explain that SW are looking at the way they charge
7.00-7.05pm	**Pub Quiz** **HANDOUT 3 – JUST FOR TABLE FACILITATORS: Pub Quiz Sheet**
7.05-7.15pm	**Pub Quiz answers**
7.15pm - 7.30pm	**Table Discussion: Pricing** ▪ What is important to customers regarding pricing? How do you think pricing should be structured based on the options you have just heard? WRITE THESE ON FLIP CHARTS **HANDOUT 4 Water Pricing Considerations**

	▪ Looking at some of these considerations, what other things do you think they need to take account of in structuring their pricing? ▪ E.g. simplicity, bill certainty, ability to influence bill (i.e. higher usage charge rather than fixed), encouraging conservation, equity (do low-income customers have lower consumption), fairness, support for vulnerable customers? WRITE THESE ON FLIP CHARTS ▪ On a flipchart write up the overarching principles that should be set around pricing. *A nominated spokesperson at each table should be chosen to feedback their table's principles that should be set around pricing. Let them know they only have 1 minute each to present so they should be brief.*
7.30-7.40pm	**Table feedback: Pricing principles** ▪ Each table to feedback on overarching principles
7.40-7.45pm	**Presentation: Water Pricing options** ▪ Provide water tariff structure options with examples of impacts on bills
7.45-7.55pm	**Table discussion: Water Pricing options** **GIVE OUT HANDOUT 5: Pricing Impacts** What do you think is the ideal proportion of fixed versus variable charges? Why? Should we take account of the potential impacts on lower income households? When prices are changed, what is your preferred way of transitioning to the new prices ▪ Make the change up front, with stable prices going forward ▪ Change gradually over several years
7.55-8.00pm	**Keypad Questions: Water Pricing Options** **Q. What is your preferred proportion of fixed versus variable charges?** 1 Much higher fixed charges with much lower variable charges 2 Slightly higher fixed charges with slightly lower variable charges 3 Fixed and variable charges in the same proportions as now 4 Slightly lower fixed charges with slightly higher variable charges 5 Much lower fixed charges with much higher variable charges **Q. Which of the four water pricing scenarios do you prefer?** 1 Current 2 Scenario A 3 Scenario B 4 Scenario C **Q. If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be?** 1 Make the change up front, with stable prices going forward 2 Change over two years 3 Change over four years **Q. If Sydney Water were to decrease the usage charge and increase the fixed charge, how gradual should the change be?** 1 Make the change up front, with stable prices going forward 2 Change over two years 3 Change over four years

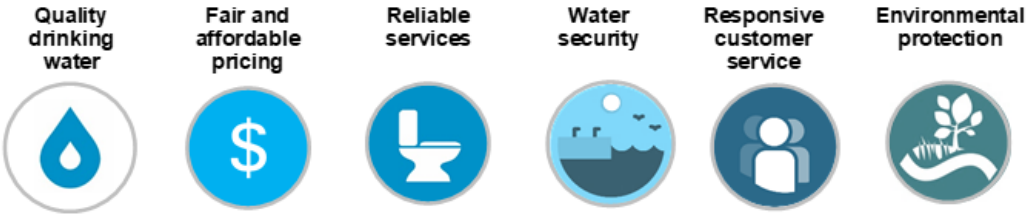
	Q. What was your most important consideration when choosing your preferred scenario? 1 The expected impact on my bill 2 Bill certainty/ability to influence my bill 3 Impacts on low-income households 4 Providing the right incentives for water usage 5 Other **Q. What was your second most important consideration when choosing your preferred scenario?** 1 The expected impact on my bill 2 Bill certainty/ability to influence my bill 3 Impacts on low-income households 4 Providing the right incentives for water usage 5 Other
8.00-8.10pm	**DESSERT**
8.10-8.15pm	**Presentation: Wastewater Pricing options** ▪ Volumetric wastewater ▪ Fixed versus variable charges ▪ Explanation of wastewater charging options
8.15-8.30pm	**Table discussion: Wastewater Pricing options** ▪ Do you think the wastewater part of your bill should include a variable component based on your water usage, or just be a fixed charge (as it is currently)? Why? – What are the pros and cons of having a variable component? ▪ If the wastewater part of your bill remains fixed with no variable component, should the fixed amount be the same for apartments and houses or different? Why? – If different, should it be higher or lower for apartments than houses? Why? **HANDOUT 6a/b Wastewater impacts** ▪ Which of the three options do you prefer? Why?

8.30-8.35pm	**Keypad questions: Wastewater Pricing** **Q. Do you think the wastewater part of your bill should include a variable component based on your water usage?** 1 Yes 2 No, I prefer the current approach with a fixed charge only 3 I don't have a firm preference **Q. If the wastewater part of your bill remains fixed with no variable component, should the fixed amount be the same for apartments and houses?** 1 All dwellings should pay the same fixed charge 2 Houses should pay a higher fixed charge than apartments 3 Houses should pay a lower fixed charge than apartments 4 I don't have a firm preference **Q. Overall, which wastewater pricing approach do you prefer?**  **Q. What was your most important consideration when choosing your preferred approach?** 1 The expected impact on my bill 2 Bill certainty / ability to influence my bill 3 Impacts on low-income households 4 Providing the right incentives for water usage 5 Other
8.35-8.40pm	**Presentation: Rainwater in the wastewater system** ▪ Problems caused by rainwater and groundwater entering our wastewater system. ▪ Can be caused by tree roots getting into pipes, groundwater seeping in and illegal private stormwater connections. ▪ Typically the property that gets the wastewater overflow is not the one that has caused the problem. ▪ Should the whole customer base pay for the work needed or just the individual customers with faulty pipes?
8.40-8.50pm	**Table discussion: Rainwater in the wastewater system** ▪ What are your thoughts on this issue? **HANDOUT 7: Impact of source control on the bill** ▪ What do you think about the possible options presented? – What are the pros and cons of each? ▪ What do you think should happen, should SW build bigger pipes to cope or should they fix the source of the problem? Why? ▪ If they should fix the source of the problem, who should pay? The home owner or Sydney Water (and the cost is recovered from all customers)? Why?

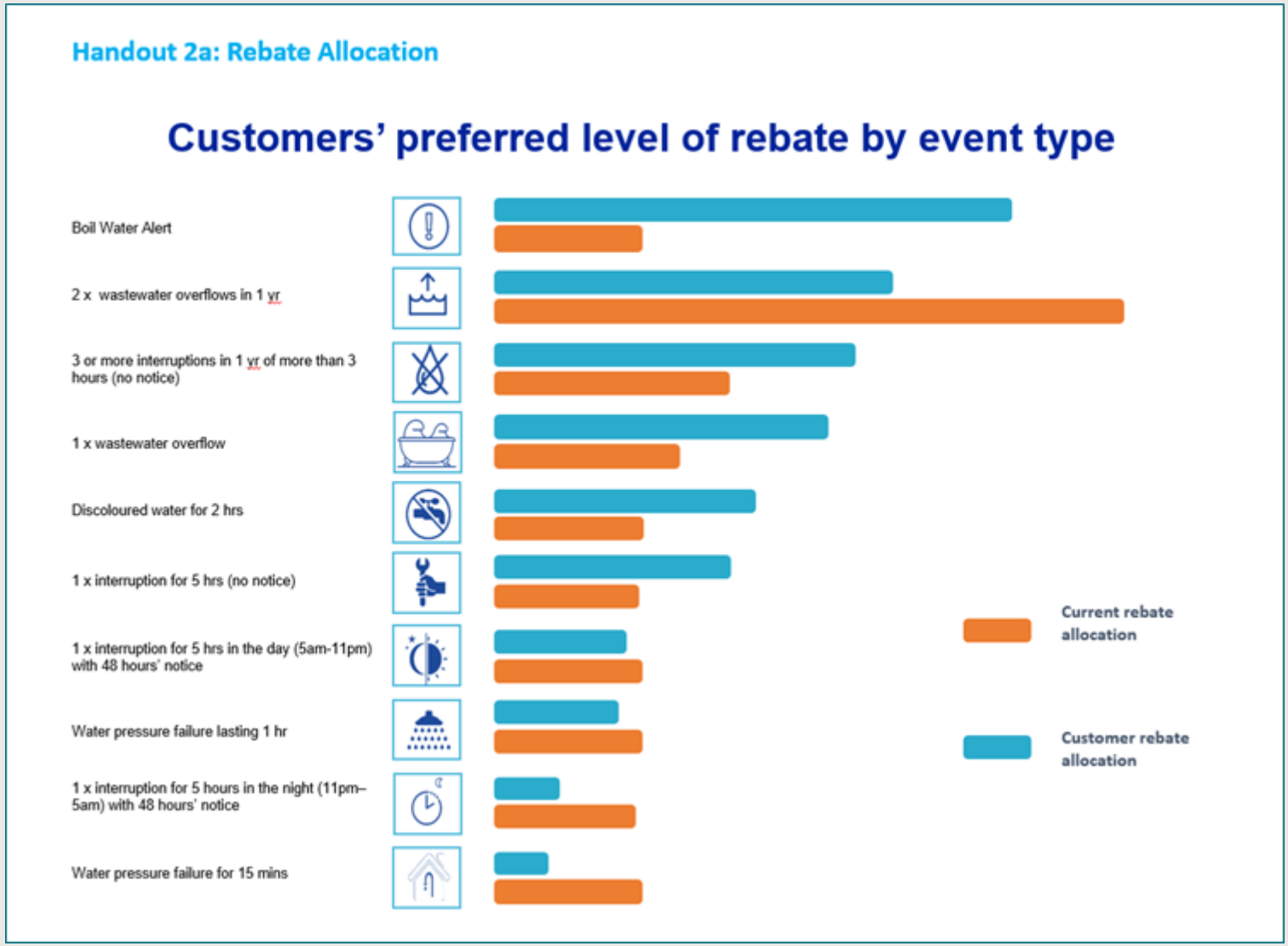
8.50-8.55pm	**Final keypad questions** **Q. What is your preferred approach to dealing with ground water and stormwater inflow into the sewerage network?** 1 Build bigger pipes and storage which everyone pays for 2 Sydney Water rectifies customers plumbing but everybody pays for it through wastewater bills 3 Sydney Water rectifies customers plumbing and the homeowner pays for it
8.55pm	**Summing up, thank you** *Sydney Water closing remarks* – what Sydney Water will take from today and confirmation of next steps.
9.00pm	**CLOSE** *Woolcott Research Lead Facilitator* – thanks and reminder to fill in end of session questionnaire on tables

B Forum handout 1 – customer priorities

Handout 1: Customer Priorities



C Forum handout 2a – rebate allocations



D Forum handout 2b – rebate initiatives

Handout 2b: Rebate Initiatives

Event	Current Rebate $	Proposed $
Boil water alert	$35	**$50**
1 x wastewater overflow	$60	**$75**
2 x wastewater overflows in a year	Annual wastewater service charge (approx. $600)	**+$150**
3 x wastewater overflows in a year	-	+Annual wastewater service charge (**approx. $600**)
Interruption with notice lasting more than 5 hours	$35	**$20**
Interruption with no notice of more than 5 hours	$35	**$40**
3 or more interruptions with no notice in once year lasting over an hour	Annual 12 month service charge (approx. $80)	Annual 12 month service charge (**approx. $80**)
1x water pressure failure for 15 mins or more	$35 per quarter (max 4 payments per year)	**Nil**
3+ water pressure failures for 15 mins or more per year	-	Annual service charge rebate (**approx. $80**)
Discoloured water	$35	**$40**

E Forum handout 3 – pub quiz

Handout 3: Pub Quiz

Q1. How much does it cost to refill a 600ml drink bottle?

1. Less than a 1 cent
2. 10 cents
3. 50 cents
4. $1

Q2. How do you think Sydney Water bills compare to bills in other Australian cities?

1. Sydney Water bills are higher than other cities
2. Sydney Water bills are about the same as other cities
3. Sydney Water bills are lower than other cities

Q3. If you had to guess, would you say the fixed proportion of water bills across Australian cities is the same or different?

1. The fixed proportion is the same in all other cities
2. The fixed proportion is different in other cities

Q4. Do you think having a higher fixed charge means you have……?

1. More certainty over your water bill
2. Would make no difference to your water bill
3. Less certainty over your water bill

Q5. Do you think higher income households would use more water on average than lower income households?

1. Yes, high income households would use more water
2. There is no strong relationship between income and how much water people use
3. No, lower income households would use more water

Q6. Do you think that houses on larger blocks of land would use more water on average than those on smaller blocks?

1. Households on larger blocks would use more water
2. There is no strong relationship between the size of a household's block of land and how much water they use
3. Households on smaller blocks would use more water

Q7. What proportion of Sydney Water's costs are fixed (i.e. that don't depend on the amount of water used in the system)?

1. 25%
2. 50%
3. 75%
4. 100%

Q8. How much does water usage decrease when the usage price goes up by 10%?

1. Water usage falls by more than 10%
2. Water usage falls by 5%-10%
3. Water usage falls by less than 5%
4. Water usage does not change

Q9. What percentage would you estimate the current dam levels to be in the Greater Sydney area?

1. Currently at 80-100%
2. Currently at 60-80%
3. Currently at 50%
4. Currently at less than 50%

Q10. Greater water usage is definitely bad for the environment – true or false?

1. True
2. False

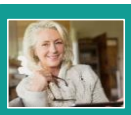
F Forum handout 4 – water pricing considerations

G Forum handout 5 – water pricing structure scenarios

Handout 5: Water pricing structure scenarios

	Current	Scenario A	Scenario B	Scenario C
Water usage charge	$2.08 per kilolitre	$1.40 per kilolitre	$1.80 per kilolitre	$2.20 per kilolitre
Water fixed charge	$80.67 per dwelling per year	$240.32 per dwelling per year	$145.53 per dwelling per year	$50.73 per dwelling per year

Annual water bill (excluding wastewater)

	Current	Scenario A	Scenario B	Scenario C
 Low consumption (100 kL per year)	$289	$380	$326	$271
 Typical apartment (160 kL per year)	$413	$464	$434	$403
 Typical house (220 kL per year)	$538	$548	$542	$535
 High consumption (350 kL per year)	$809	$730	$776	$821

H Forum handout 6a and 6b – wastewater pricing structure scenarios

Handout 6a:

Options for Wastewater charging

Sydney WATER

Current approach with one fixed charge

$ equal

Different fixed charges for units and houses

$x

$y

Fixed + Usage Charge

Usage charge based on a discharge factor

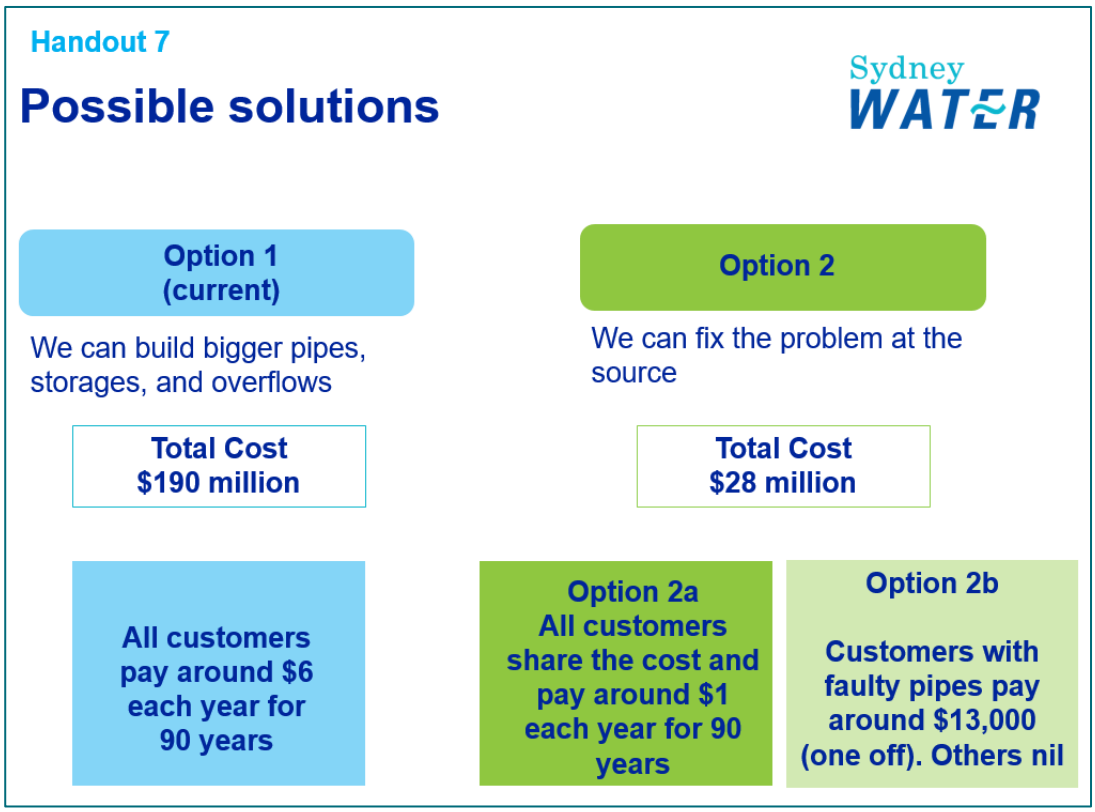
Handout 6b:

Indicative wastewater bill impacts

Sydney WATER

	Same fixed charge for all properties (current)	Different fixed charge for apartments standalone houses	Fixed charge plus a usage charge applied to water usage
Low consumption (100 kL per year)	No Change	↑	↓
Typical apartment (160 kL per year)	No Change	↓	↓
Typical house (220 kL per year)	No Change	↑	↑
High consumption (350 kL per year)	No Change	↑	↑↑

I Forum handout 7 – possible solutions



J Forum recruitment screener

***INFORMATION ABOUT SYDNEY WATER FOR INTERVIEWERS**
Sydney Water are responsible for providing running water to your property and for removing waste water, as well as minimising the impact on the environment from these activities. They are responsible for the entire Greater Sydney area, as well as the Illawarra and Blue Mountains. They are 100% owned by the NSW state government.

IF NEW PARTICIPANT:

Good morning/ afternoon, my name is _____ from Woolcott Research and I'm calling on behalf of Sydney Water [**PROVIDE EXTRA INFO IF NEEDED***]. The reason for my call is that they are holding a number of paid community forums and we are inviting a random selection of people to register their interest in taking part.

The purpose of the forum is for Sydney Water to find out what you think of their services; what's most important to you and what changes they could make to what they do and how they operate to better reflect your views and preferences.

You do not need to know anything at all about water or wastewater services to take part.

The forum in your area is being held on [insert date from above] from [insert time above] in [insert location above]. Up to 80 community members will take part.

Tea and coffee will be provided, with a light dinner served midway through the forum. You will be given $100 at the event to compensate you for your time and to cover any expenses.

RETURNING PARTICIPANT:

Thank you again for your attendance at the Sydney Water Community forum in March.

Your feedback was invaluable and Sydney Water are using this to develop their Operating Licence submission.

They would now like to hear your views on pricing and tariffs so we will be hosting another forum in your area [insert location above], on [insert date above] from [insert time], and it would be great if you would be able to join us again. They will also share

some potential changes they are thinking of making to rebates in light of the feedback that you provided at the last forum.

We are also expecting that we will need to find some additional attendees for this forum, in place of previous participants who are unable to attend this time. If you happen to know some people aged between 18-50 years who may be interested, we would appreciate you passing our details on, or providing their details at the end of this conversation.

1. Would you be interested in participating?

Yes	1
No	2 – **THANK AND TERMINATE**

Thank you. I will just need to ask you a few questions to ensure we get a good cross-section of participants. So firstly…

2. Do you, or any immediate members of your family, work for Sydney Water, any other water or wastewater utility company, IPART (the Independent Pricing and Regulatory Tribunal), a water quality related role with NSW Health* or NSW Environment Protection Authority?

*** NOTE TO INTERVIEWERS: doctors, nurses and other health practitioners <u>are</u> allowed in the forums**

Yes	1 – **TERMINATE**
No	2

3. Is the place you live in: **READ OUT. CHECK QUOTAS**

Owned outright or with a mortgage	1
Being rented or occupied rent-free	2
Other (please specify)	3

4. Which of the following best describes the water and wastewater bills you receive for the residence you live in?

I receive bills from Sydney Water	1
I receive bills from Sydney Water and from my body corporate	2
My landlord receives bills from Sydney Water and charges the full amount to me as a specific charge separate from rent	3
My landlord receives bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent	4
My landlord charges me a specific amount for water and wastewater, but I don't know how that amount relates to the Sydney Water bill	5
I do not directly pay any amount for water and wastewater	6

5. Record gender: **CHECK QUOTAs PRE-POPULATE FOR RETURNING PARTICIPANTS**

Male	1
Female	2
Non-gender specific	3

6. Can you please tell me your age? _____ **CHECK QUOTAS TERMINATE IF UNDER 18 PRE-POPULATE FOR RETURNING PARTICIPANTS**

IF REFUSED, TRY TO GET AGE BRACKET: PRE-POPULATE FOR RETURNING PARTICIPANTS
Can you please tell me which of the following age groups you fall into? **READ OUT**

Under 18	1	**TERMINATE**
18-24	2	
25-34	3	
35-44	4	
45-54	5	
55-64	6	
65+	7	

7. Do you speak a language other than English at home or with family? **CHECK QUOTAS**

No, English only	1	**SKIP TO Q9**
Yes	2	**ASK Q8**

8. What is the main language spoken at home or with family other than English? **DNRO**

Arabic	1
Australian Indigenous Languages	2
Cantonese	3
Croatian	4
Dutch	5
French	6
German	7
Greek	8
Hindi	9
Indonesian	10
Italian	11
Japanese	12
Korean	13
Lebanese	14
Macedonian	15
Mandarin	16
Polish	17

Punjabi	18
Serbian	19
Spanish	20
Tagalog (Filipino)	21
Turkish	22
Vietnamese	23
Other (please specify)	24
Prefer not to say	25

9. Are you of Aboriginal or Torres Strait Islander origin?

No	1	
Yes	2	
Prefer not to say	3	**DO NOT OFFER**

10. What is your approximate annual household income? **READ OUT**

Less than $41,600	1	
Between $41,600 and $78,000	2	
Between $78,000 and $104,000	3	
Between $104,000 and $156,000	4	
More than $156,000	5	
Do not wish to answer	6	**DO NOT OFFER**

11. Are you a member of any special interest groups or associations related to water?

Yes (please specify)	1
No	2

Thank you for providing all of this information, you have qualified to participate in the community forum and we look forward to seeing you on the day.

Just to confirm, you have agreed to attend the forum on [insert date above] from [insert time] in [insert location above].

Due to space limitations, only people who have completed this questionnaire will be able to attend on the day, and only one person per household

12. Could I please record your full name and contact details so we can send you a letter or email to confirm your attendance and provide all the details of the event?
PRE-POPULATE FOR RETURNING PARTICIPANTS

TITLE: _____
FIRST NAME: _____
SURNAME: _____
CONFIRM PHONE NUMBER: _____
MOBILE NUMBER: _____
1ST LINE ADDRESS: _____
2ND LINE ADDRESS: _____

SUBURB: _____
POSTCODE: _____
EMAIL ADDRESS: _____

INTERVIEWER NOTE: Repeat back all details above to check spelling

13. Would you prefer to be contacted by letter or by email?

    Letter 1
    Email 2

14. And finally, do you have any special needs to enable you to attend on the day? E.g. accessibility or dietary requirements (due to health, cultural or religious reasons)

    _____
    _____

Thank you for your time and willingness to attend. We will also give you a phone call in the week leading up to the forum to remind you of the forum and confirm attendance.

If you find you are unable to attend for any reason, please contact Melissa Homann on 02 9261 5221 as soon as possible as we will need to find a replacement for you. You can also contact Melissa or Liz if you require any further information about the forums.

K Discussion guide and handouts for SME discussion groups

Discussion Guide: *Sydney Water (SMEs) 1.5 hours – Phase 2 (June-Sept)*

Introduction (2 minutes)

Introduce yourself; welcome; explain the project and process:

- Work for an independent research company called WR
- Doing this project for Sydney Water (water and wastewater service provider)
- The purpose of the group discussion is to gain their feedback on what is important to **small and medium business** customers so that Sydney Water can ensure that their services and prices are in line with what customers care about.
- As they are a monopoly provider, they are regulated by an independent body who monitors their performance, recommends minimum standards and set their prices.
- Your views tonight are going to help with some of the decisions they need to make to develop their proposal to the regulator.
- Our role is to report back to Sydney Water on your feedback however your responses are confidential and anonymous. We report in an overall basis only and do not mention specific names, etc.
- Explain that this is the second phase of a three phased engagement program planned for this year, and that this phase is focussing on confirming customer priorities, proposed changes to rebates, water and wastewater price structures and dealing with problems caused by rainwater in the wastewater system.

Check ok to record the discussion – only for our purposes. Explain viewing.

Warm up (3 mins)

Ask them to introduce themselves and a little about what their business does and their role within it.

1. Customer priorities (10 minutes)

Facilitator note: Ensure for all questions that SMEs are responding with the SME 'hat' on rather than residential.

Give handout 1: Introduction to Sydney Water

In forums, surveys and groups like this that were held in February/March this year, people told us the outcomes they wanted most from Sydney Water. Handout 1a provides an overview of what the customer priorities were.

Give Handout 1a: Customer priorities

Do these priorities cover the outcomes that are most important to you?

Is there anything missing that you feel is a top priority?

2. Rebates (15 minutes)

EXPLAIN TO GROUP MEMBERS:
Sydney Water is required to meet standards in a whole range of areas that relate to some of the priorities that have been mentioned. If Sydney Water doesn't meet some of these standards then it pays a rebate to those customers affected.

Some of these types of events are:

Boil water alert – A boil water alert is released by NSW Health and occurs when drinking water supplies have been contaminated. This is very rare.

Water interruptions – when your water supply is turned off so broken pipes can be fixed

Wastewater overflows – wastewater is the used water that goes down sinks, toilets and drains indoors. When there is a blockage in the pipes, e.g. due to tree roots, wastewater can flow out of a grate outdoors on your property or, in rare cases, out of a drain or toilet inside your building.

Water pressure failure – slow flow of water from your taps, which may mean it takes longer to fill a bucket or you can't use water from two taps on your property at the same time.

Discoloured water – This is not wastewater. Typically, this would be caused by some silt left in the line that gets flushed through the system after repairs have occurred. While the discoloured water is not dangerous and won't make you sick, it could have other effects, e.g. cause damage or discolouration to clothing if it goes through a washing machine.

Give Handout 2a: Views on rebates from Phase 1, Handout 2b: Proposed changes to rebates

Note the changes are a *rebalancing*, designed to keep the overall amount paid out in rebates roughly unchanged.

- What do you think of these proposed changes to rebates?
- Do rebates matter to you?
- What do you think of each proposed change (moderator to go through each set of changes, i.e. boiled water alerts, wastewater overflows, interruptions, low pressure, discoloured water)?
- Do you think they are a move in the right direction?
- Overall, do you think the proposed changes are an improvement on the previous set of rebates? To what extent do you support the changes to the rebates as an overall package?

3. Price structure considerations (20 minutes)

EXPLAIN TO GROUP MEMBERS:
For the much of the rest of the session we're going to be talking about pricing and what is important to you. There are a number of ways that Sydney Water can calculate their charges so we would like to hear your thoughts on these. First we'll go back to the basics on the bill.

Give Handout 3a: Water pricing

In order to give a bit of background about pricing we have devised a little quiz.

Give Handout 3b: Quiz
Ask them to fill it in

Give Handout 3c: Quiz answers
Go through the answers - ask how many they got right.

Ok, now you have heard a bit more about pricing and water usage we'd like to hear more about what you think is important.

1 What is important to small and medium business customers regarding pricing – what should SW take into account when thinking about how to structure pricing for these customers?

USE BUTCHERS PAPER TO LIST KEY CONSIDERATIONS WHEN SETTING WHEN SETTING FIXED AND VARIABLE PRICES

2 Ask group to collectively decide on their top 3 considerations

Water pricing options (15 minutes)

One of the things that Sydney Water could do to change how they charge is to change the levels of fixed and variable charges. As you saw in the quiz, currently on average 62% of the bill is a fixed charge, but this could be higher or lower. However, this would not affect the total amount of revenue that Sydney Water obtains, it would only affect the relative amounts that each customer pays. So it really depends on what you think the best way of charging is.

Give handout 4: Water price scenarios

3 Looking at the different scenarios and their impact on bill payers, what do you think is the ideal proportion of fixed versus variable charges? Which scenario do you prefer? Why?
   - What did you take into account when deciding? E.g.
     - The expected impact on your bill
     - Bill certainty/ability to influence your bill
     - Providing the right incentives for water usage
     - Anything else

4 If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be? (e.g. all at once, over 2 years or over 4 years) Why?
   - Would your answer differ if Sydney Water were to decrease the usage charge and increase the fixed charge? Why?

Wastewater pricing options (20 minutes)

EXPLAIN TO GROUP MEMBERS:
Like the water charges discussed above, wastewater charges include a fixed charge and a usage charge.

The fixed charge depends not only on the size of your meter, but also on the discharge factor applied to your property. The discharge factor is the proportion of your water usage that is assumed to enter the wastewater system.

Wastewater isn't metered directly except in special circumstances. The usage charge is based on your water usage multiplied by the discharge factor.

Sydney Water is interested in your views on the balance between fixed and variable charges.

Give handout 5: Wastewater price scenarios

- Do the pricing considerations discussed earlier differ for wastewater compared to water?
- Which of the scenarios do you prefer bearing in mind the considerations?
- What were the main factors in your decision?
- If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be? (e.g. all at once, over 2 years or over 4 years) Why?
- Would your answer differ if Sydney Water were to decrease the usage charge and increase the fixed charge? Why?

Rainwater in the stormwater system

EXPLAIN TO GROUP MEMBERS:
This last topic is about wastewater overflows that are caused by rainwater and groundwater entering the wastewater system and the approaches to dealing with this.

Unlike rebates and pricing topics, the decisions you make in this area may impact on your bill, and the revenue Sydney Water receives.

Sydney Water's wastewater system is designed to collect and transport wastewater. It should be a closed system. However sometimes other water gets in - caused by tree roots creating holes in the pipes and groundwater or rainwater seeping in, and illegal private stormwater connections i.e. people connecting their downpipes to the wastewater system. We are talking about broken pipes or illegal stormwater connections that belong to customers, not Sydney Water. While some customers may be aware, many may not.

The extra water in the wastewater system can lead to wastewater overflows onto other people's properties further down the line.

Give handout 6: Rainwater in the wastewater system

5 What do you think about the possible options presented?
   - What are the pros and cons of each?
6 What do you think should happen, should SW build bigger pipes to cope or should they fix the source of the problem? Why?
7 If they should fix the source of the problem, who should pay? The home owner or Sydney Water (and the cost is recovered from all customers)? Why?

Any final comments to Sydney Water?

Thank, give incentive and close

Handout 1: Introduction to Sydney Water

Sydney Water is Australia's largest water and wastewater service provider.

We cover an area of 12,700 km throughout Greater Sydney, from Broken Bay in the North, to the Blue Mountains in the West and down South into the Illawarra.

Every year, we supply over 551 billion litres of drinking water to over 5 million people

We purchase bulk water from dams, filter it, treat it, test it and transport it to homes and businesses.

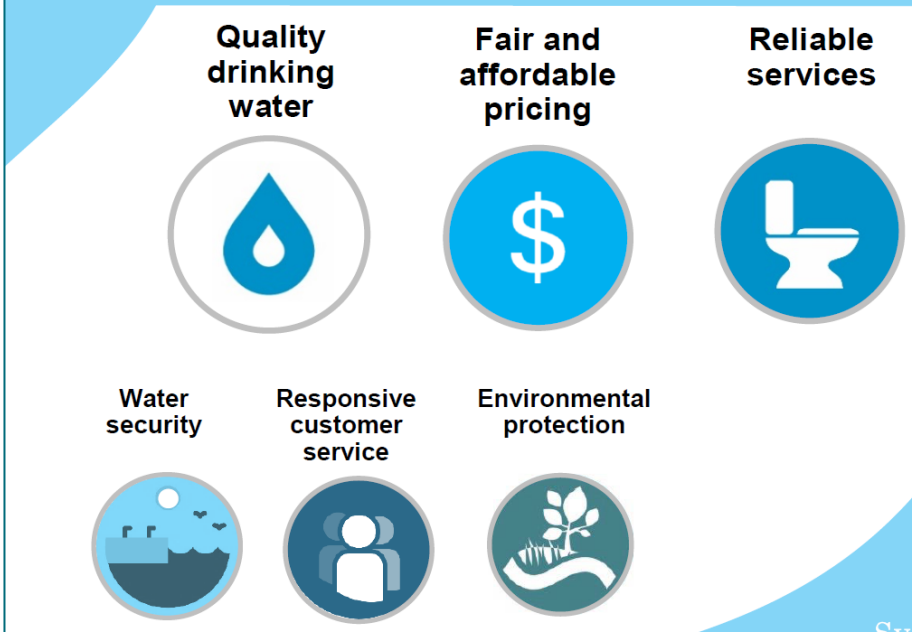
After it's used, we collect and treat wastewater, and then discharge it in accordance with our environmental licence conditions. Wastewater includes sewage, as well as the water that drains from kitchens, bathrooms and laundries.

We recycle water for use by households and businesses, and to reduce the impact of wastewater discharges on local waterways.

We also provide some stormwater services, however the majority of stormwater services are provided by councils.

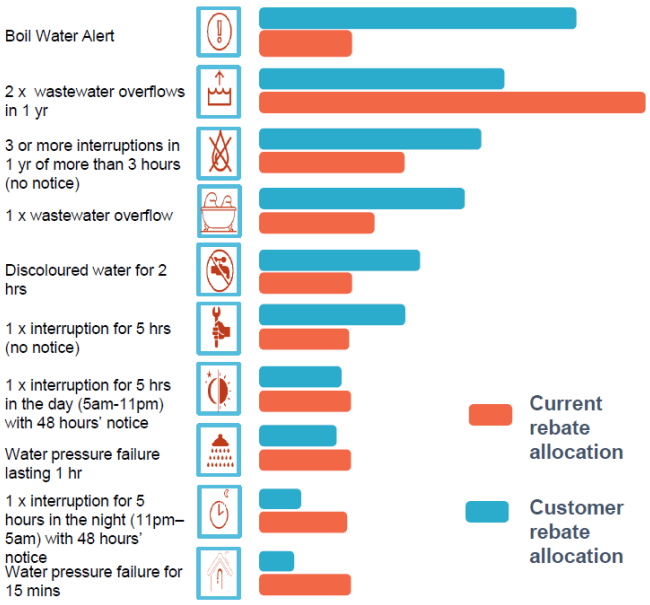
We have a large network to move the water around which include water filtration plants, wastewater treatment and recycling plants, as well as pumping stations and many thousands of kilometres of pipes

Handout 1a: Customer priorities



Handout 2: Views on rebates

Sydney WATER



Customers expect rebates to continue and most said that they would like them to be paid automatically. Customers thought the highest rebates should be paid for, 'boil water' alerts, wastewater overflows, water interruptions without notice and discoloured water. You also indicated that you felt little or no rebate should be paid for water pressure failures or water interruptions where notice is given.

You also told us that renters, who experience the incidents should receive the rebate. We are not proposing any changes in this area at this point. Sydney Water only charges and has information on the property owner, not the occupant. This is something we may revisit in the future.

You told us that you thought businesses should receive higher rebates than residential customers. This already occurs for rebates that are based on service charges if a business has a larger meter size. We are proposing to maintain flat fixed amounts for other rebates, which is consistent with other water utilities that offer rebates (not all do). Businesses can also claim for any loss of business due to a Sydney Water fault through their business interruption insurance.

Handout 2b: Rebate Initiatives

Event	Current Rebate $	Proposed $
Boil water alert	$35	**$50**
1 x wastewater overflow	$60	**$75**
2 x wastewater overflows in a year	Annual wastewater service charge (see overleaf)	**+$150**
3 x wastewater overflows in a year	-	+ Annual wastewater service charge (see overleaf)
Interruption of 5 hours or more, with notice	$35	**$20**
Interruption of 5 hours or more, with no notice	$35	**$40**
3 or more interruptions of over an hour in one year, without notice	Annual water service charge (see overleaf)	Annual water service charge (see overleaf)
1x water pressure failure for 15 mins or more	$35 per quarter (max 4 payments per year)	**Nil**
3+ water pressure failures for 15 mins or more per year	-	Annual water service charge (see overleaf)
Discoloured water	$35	**$40**

Meter size	Annual water service charge $	Annual wastewater service charge[a] $
20 mm	$80.76	$578.12
25 mm	$126.04	$903.16
32 mm	$206.60	$1479.76
40 mm	$322.72	$2312.08
50 mm	$504.20	$3612.72
80 mm	$1290.80	$9248.40
100 mm	$2016.84	$14 450.56
150 mm	$4537.80	$32 513.72
200 mm	$8067.20	$57 802.12

[a] assumes 100% discharge factor

Handout 3a: Water pricing

Sydney WATER

Sydney Water bills for businesses usually have four main charges:

1. A water service charge (This is a **fixed** charge based on the size of your meter)
2. A wastewater service charge (This is a **fixed** charge based on the size of your meter and your discharge factor)
3. A water usage charge (This is a **variable** charge i.e. it depends on how much water you use)
4. A wastewater usage charge (This is a **variable** charge based on how much water you use and your discharge factor. It is charged if you discharge more than 0.411 kL/day)

Account for commercial property

	Fixed charges - GST free		1 Jul 18 - 30 Sep 18
1	Water service		
2	Wastewater (sewerage) service		
	Usage charges - GST free		2 Jun 18 - 1 Jul 18
3	Water	02/06 - 30/06	[redacted] kL at $2.0400 a kL
		01/07 - 01/07	kL at $2.0800 a kL
4	Wastewater	02/06 - 30/06	kL at $1.1300 a kL
		01/07 - 01/07	kL at $1.1600 a kL

Discharge factor
The discharge factor is the proportion of your water usage that is assumed to enter the wastewater system.

There are a number of options for rebalancing these charges, and Sydney Water is keen to understand what you, our customers think.

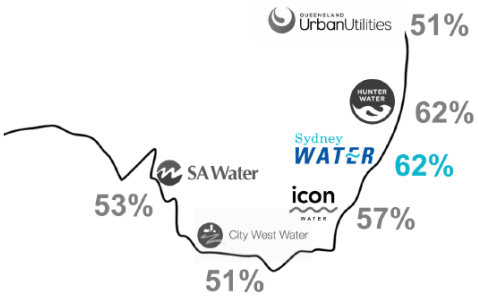
Handout 3c: Quiz answers

Sydney WATER

Q1. How much does it cost to refill a 600ml drink bottle? 1. Less than 1 cent

1 cent = 4.8L

Q2. If you had to guess, would you say the fixed proportion of water bills across Australian cities is the same or different?
2. Different – examples below for 50kL/qtr



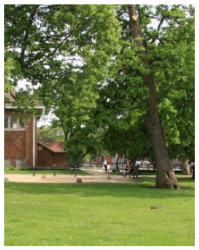
Q3. Do you think having a higher fixed charge means you have……? 1. More certainty

Q4. What proportion of Sydney Water's costs are fixed (i.e that don't depend on the amount of water used in the system)? 3. ~75%

Q5. How much does water usage decrease when the usage price goes up by 10%? 3. Less than 5% (in fact, about 1%)

Q6. What percentage would you estimate the current dam levels to be in the Greater Sydney area? 2. 60%-80%

Q7. Greater water usage is definitely bad for the environment – true or false? 2. False – water and greenery can help with urban cooling and erosion control



Handout 4: Water price scenarios

Sydney WATER

	Current	Scenario A	Scenario B	Scenario C
Water usage charge	$2.08 per kilolitre	$1.40 per kilolitre	$1.80 per kilolitre	$2.20 per kilolitre
Water fixed charge 20mm	$20.19 per quarter	$60.08 per quarter	$36.38 per quarter	$12.68 per quarter
Water fixed charge 50mm	$126.05 per quarter	$375.50 per quarter	$227.39 per quarter	$79.27 per quarter
Water fixed charge 80mm	$322.70 per quarter	$961.28 per quarter	$582.12 per quarter	$202.92 per quarter

Quarterly water bill (ex. wastewater)	Current	Scenario A	Scenario B	Scenario C
Strata unit (20mm meter, 25 kL/qtr)	$72	$95	$81	$67
Low user (20mm meter, 75 kL/qtr)	$176	$165	$171	$178
Medium user (50mm meter, 1675 kL/qtr)	$3 610	$2 721	$3 242	$3 764
High user (80mm meter, 6500 kL/qtr)	$13 843	$10 061	$12 282	$14 503

Handout 5: Wastewater price scenarios

Sydney WATER

	Current	Scenario A	Scenario B	Scenario C
Wastewater usage charge	$1.16 per kilolitre	$0.50 per kilolitre	$0.80 per kilolitre	$1.50 per kilolitre
Wastewater fixed charge 20mm	$156 per quarter	$162 per quarter	$159 per quarter	$153 per quarter
Wastewater fixed charge 50mm	$748 per quarter	$911 per quarter	$837 per quarter	$661 per quarter
Wastewater fixed charge 80mm	$1847 per quarter	$2303 per quarter	$2097 per quarter	$1604 per quarter

Quarterly wastewater bill (ex. water)	Current	Scenario A	Scenario B	Scenario C
Strata unit 20mm meter 25 kL/qtr 80% discharge factor	$159	$165	$163	$155
Low user 20mm meter 75 kL/qtr 85% discharge factor	$197	$187	$192	$201
Medium user 50mm meter 1675 kL/qtr 80% discharge factor	$2 277	$1 585	$1 900	$2 630
High user 80mm meter 6500 kL/qtr 70% discharge factor	$6 896	$4 325	$5 495	$8 214

Handout 6: Rainwater in the wastewater system

Sydney WATER

The 'problem'

An increase in wastewater overflows can be due to:

Private plumbing faults/disrepair, including broken or cracked private lines

Ground/rain water infiltration

The source of wastewater overflows is not always close by

Possible solutions

Option 1 (current)

We can build bigger pipes, storages, and overflows

Total Cost $190 million

All customers pay around $6 each year for 90 years

Option 2

We can fix the problem at the source by making repairs to customers' private sewer and stormwater pipes

Who pays?

Option 2a	Option 2b
Whole Sydney Water customer base	Customers with faulty pipes pay
Total Cost $28 million	
Option 2a All customers share the cost and pay around $1 each year for 90 years	Option 2b Customers with faulty pipes pay around $13,000 (one off). Others nil

L Recruitment screener SMEs

SME group screener

2 full groups of Small and Medium Business water and waste water decision makers. By water decision makers we mean those who would have a role in interacting with SW either if there was a water interruption or wastewater overflow or by paying water bills (8 per group). 1.5 hours duration.
Please note that previous SME attendees to the SW groups in March can be invited back but must qualify at Q2.

Sydney – City Group Rooms – Monday 20th August 7:30pm (LS)
Parramatta CGR – Wednesday 22nd August 7:30pm (LE or DW?)

1. What is the postcode of where your business is located? **CHECK IN SW AREA. IF NOT TERMINATE.**

_____

2. How many employees do you have in your business, by employees we mean full time equivalents other than the proprietor? **Please recruit a mix of sizes**

No employees/sole trader	1	**GO TO Q2b**
1 - 4 employees	2	
5 - 10	3	
11 - 19	4	
20 - 199	5	
200+	6	**TERMINATE**

2b. **IF NO EMPLOYEES/SOLE TRADER**: Do you operate your business out of your home/home office?

Yes	1	**TERMINATE**
No	2	

3. Are you a decision maker for your organisation regarding water supply or wastewater services?

Yes	1	
No	2	**TERMINATE**

4. Which of the following best describes the water and wastewater bills you receive for your business? **TERMINATE IF CODE 6 (ALL SMEs MUST PAY OR CONTRIBUTE TO BILLS)**

I receive bills from Sydney Water	1
I receive bills from Sydney Water and from my body corporate	2
My landlord receives bills from Sydney Water and charges the full amount to me as a specific charge separate from rent	3
My landlord receives bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent	4
My landlord charges me a specific amount for water and wastewater, but I don't know how that amount relates to the Sydney Water bill	5

I do not directly pay any amount for water and wastewater 6 - TERMINATE

5. Do you, or any immediate members of your family, work for Sydney Water, any other water or wastewater utility company, IPART (the Independent Pricing and Regulatory Tribunal), a water quality related role with NSW Health or NSW Environment Protection Authority?
   Yes 1 **TERMINATE**
   No 2

6. What industry does your business operate within?

PLEASE ENSURE A GOOD MIX OF INDUSTRY TYPES

Accommodation, cafes and restaurants	1
Agriculture, forestry, fishing and hunting	2
Communication services	3
Construction	4
Cultural and recreational services	5
Education	6
Electricity or gas supply	
Finance and insurance	7
Government administration and defence	8
Health and community services	9
Manufacturing	10
Mining	11
Personal services	12
Property and business services	13
Retail trade	14
Transport and storage	15
Wholesale trade	16
Other (Specify):	17

7. Are you?
   Male 1
   Female 2

8. What is your position or title within your organisation?
   Owner / Proprietor 1
   Senior Management 2
   Other employee 3

9. How many years has your business been operating?
   Less than 1 year 1
   1-2 years 2

2-5 years 3
6-10 years 4
More than 10 years 5

10. Does your business own or rent/lease its business premises?
Own 1
Rent/lease 2
Other 3

- Incentive of $125 for taking part, and tea, coffee and light refreshments will be provided.
- Participants do not need to know anything at all about water or wastewater service provision to take part.

Thank you for your time.

M Significant customer topic guide and handouts

Topic Guide: Sydney Water Significant Customers
(In-Depths – 30-40 mins)

Introduction

Introduce yourself; thank participant for participating; explain the project and process:

- We work for an independent research company called Woolcott Research and Engagement
- We are doing this project on behalf of Sydney Water
- The purpose of the discussion is to gain insight into your priorities, values, and views on water issues – in particular views on service performance and tariff structures.
- This will feed into the Sydney Water's proposals that it submits to the Independent Pricing and Regulatory Tribunal (IPART).

Your input is very valuable. Our role is to report back on your feedback, however your responses are completely confidential and anonymous. We report in an overall basis only and do not mention any specific names or personal details. The findings will be fed back to you.
We are recording the interview but that is purely for our analysis and reporting purposes and it will not be provided to the client unless requested by you.

BACKGROUND

Ask participant to introduce their company and tell us a little about their role in relation to water decision making for the company.

2. Water Usage

- How does the organisation use water – particular processes it uses it for?
- What is the organisation's patterns of use? E.g. use more or less at certain times of the day or year?
  - What unique needs, if any, does your organisation have with regard to when/how water is used?

3. Interaction with sydney water

- Can you just tell me a little bit about what kinds of interaction you have with Sydney Water?
- Are there issues or opportunities that you are currently addressing with Sydney Water?
  - What is the likely impact of these issues or opportunities on your organisation?

4. Priorities

- Thinking about the future in 2030, what would you like to see more of regarding water and wastewater services?
- What would you like to see less of?

- In the future, what do you think would make an ideal water and wastewater service provider?
- What do you think are the critical things that SW should focus on to ensure significant customers such as your organisation are satisfied?
- Residential and SME customers have mentioned the following as priorities – do you agree with these as being the main priority outcomes?
  - Quality drinking water
  - Fair and affordable pricing
  - Reliable services
  - Water security (ensuring sufficient supply for the future)
  - Responsive customer service
  - Environmental protection

5. Measuring service performance

- When it comes to measuring Sydney Waters performance, what things do you feel are most important to focus on? i.e. what do you think SW should be measured on?

READ OUT: To ensure a minimum level of performance for customers, IPART recommends minimum performance standards for water supply and wastewater services. Sydney Water's current minimum standards focus on three areas

- Water pressure failures
- Unplanned water supply interruptions
- Wastewater overflows

Sydney Water is assessed on how many customers in total are affected by these types of events, and when a single customer has multiple events happen in the same year.

To put this in context only a small number of customers experience these types of events each year. For example, less than 1% of customers experience a wastewater overflow each year.

Experience and levels of inconvenience

- How frequently in the last year has your organisation experienced a water interruption, low water pressure, wastewater overflow – external or internal? How about any other type of issue with your water or wastewater service?
- Which of the above situations would you think are most inconvenient?
- Which are least inconvenient?
- Are there other events that are more important to your organisation than the three areas the current standards focus on?

Time of Day

- Are there particular times of day that are more inconvenient to have a water interruption or loss of pressure that significantly affects how your organisation operates? We understand that many significant business customers operate 24 hours a day, so this may not have an impact.
- Is it better for SW to start fixing a problem ASAP or delay and fix it at a later time to reduce potential inconvenience to organisations such as yours?

Communication and notice period

- During water interruptions, how important do you think it would be for Sydney Water to:
  - communicate what's happening during the interruption
  - communicate the likely time when the issue will be fixed
- **For example,** which of the following daytime unplanned events would you **prefer**?
  1. A water interruption that lasts for four hours but Sydney Water communicates the reason for the interruption and the estimated time that water will come back on during it.
  2. A water interruption that lasts for two hours but there is no communication from Sydney Water during it.

- During planned water interruptions, how much notice would you like to be given?

Moderators note: For planned interruptions, SW is required to give the non-residential customer 7 days notice.

- Does this vary depending on the time of day of the interruption (e.g. 7am, noon, 7pm, midnight) or duration of the interruption (1, 3, 6 hours)?
- How would you like to be given notice for planned interruptions? e.g. email, letter, SMS, other.

6. Tariffs

We've been talking to all types of customers about the structure of Sydney Water's pricing. There are five main parts of the bill for business customers:

1. The water fixed charge, which depends on the size of your meter
2. The water usage charge, which depends on how much water you use
3. The wastewater fixed charge, which depends on the size of your meter and the discharge factor applied to your premises (that is, the percentage of water use that is assumed to be put into the wastewater system)
4. The wastewater usage charge, which depends on how much water you use and the discharge factor applied to your premises
5. The trade waste charge (this is not being included in the discussion of alternative tariff structures at this time.)

When thinking about changing the mix of these parts within the bill, some of the factors other customers have considered include:

- The impact on their own bill
- Certainty or predictability of their bills vs the ability to reduce bills by reducing usage
- The fairness of pricing for other customers
- Providing the right incentives for conserving water or using water to improve the urban environment
- Do you have any views on whether you'd prefer fixed charges to make up a greater or lesser part of Sydney Water bills compared to usage charges?
- What are the main factors in your view?

ASK INTERVIEWEE TO BRING UP HANDOUT 1 – WATER PRICING SCENARIOS

- Which of the scenarios would you prefer?
- What are the main factors in your decision?
- If the pricing structure was changed, would you prefer it to happen all at once or be adjusted by smaller amounts over 2-4 years?
  - Would your answer be different if the structure being implemented was Scenario A vs Scenario C?

ASK INTERVIEWEE TO BRING UP HANDOUT 2 – WASTEWATER PRICING SCENARIOS
Facilitators note: All of these customers should have a sewer usage discharge factor. Some will have a discharge meter linked to their trade waste discharge. It is extremely rare for a customer to have a wastewater meter. Some may have their wastewater usage calculated through a manual process, however, the discharge factor would still affect their sewer service charges.

- Which of the scenarios would you prefer for wastewater?
- What are the main factors in your decision?
- If the pricing structure was changed, would you prefer it to happen all at once or be adjusted by smaller amounts over 2-4 years?
  - Would your answer be different if the structure being implemented was Scenario A vs Scenario C?

- Are there any other changes or innovations you would like to see in Sydney Water's pricing structure?

7. Engagement/customer representation

- What is the best way for Sydney Water to involve significant business customers such as your organisation in its decision making?
- Is there anything else you think SW should be engaging with organisations such as yours about?

Any final comments? Thank them for their time. No incentive.

Handout 1: Water price scenarios

Sydney WATER

	Current	Scenario A	Scenario B	Scenario C
Water usage charge	$2.08 per kilolitre	$1.40 per kilolitre	$1.80 per kilolitre	$2.20 per kilolitre
Water fixed charge 50mm	$126 per quarter	$376 per quarter	$227 per quarter	$79 per quarter
Water fixed charge 80mm	$323 per quarter	$961 per quarter	$582 per quarter	$203 per quarter
Water fixed charge 100mm	$504 per quarter	$1502 per quarter	$910 per quarter	$317 per quarter

Quarterly water bill (ex. wastewater)	Current	Scenario A	Scenario B	Scenario C
50mm meter, 2 500 kL/qtr	$5 326	$3 876	$4 727	$5 579
50mm meter, 25 000 kL/qtr	$52 126	$35 376	$45 227	$55 079
80mm meter, 20 000 kL/qtr	$41 923	$28 961	$36 582	$44 203
100mm meter, 30 000 kL/qtr	$62 904	$43 502	$54 910	$66 317

Handout 2: Wastewater price scenarios

Sydney WATER

	Current	Scenario A	Scenario B	Scenario C
Wastewater usage charge	$1.16 per kilolitre	$0.50 per kilolitre	$0.80 per kilolitre	$1.50 per kilolitre
Wastewater fixed charge 50mm	$748 per quarter	$911 per quarter	$837 per quarter	$661 per quarter
Wastewater fixed charge 80mm	$1 847 per quarter	$2 303 per quarter	$2 097 per quarter	$1 604 per quarter
Wastewater fixed charge 100mm	$2 861 per quarter	$3 588 per quarter	$3 260 per quarter	$2 474 per quarter

Quarterly wastewater bill (ex. water)	Current	Scenario A	Scenario B	Scenario C
50mm meter, 2 500 kL/qtr, D. factor 60%	$2 282	$1 436	$1 821	$2 715
50mm meter, 25 000 kL/qtr, D. Factor 95%	$28 408	$12 962	$19 983	$36 361
80mm meter, 20 000 kL/qtr, D.Factor 45%	$11 480	$5 818	$8 393	$14 393
100mm meter, 30 000 kL/qtr, D. Factor 100%	$38 413	$19 576	$28 141	$48 100

N Residential survey questionnaire

Project	Sydney Water CIPA
Engagement	Residential tariff structure
Sample	Households n=1000 bill payers

Thank you for participating in this survey, which is being run by Woolcott Research and the Centre for International Economics on behalf of Sydney Water.

As part of Sydney Water's focus on putting customers at the heart of everything we do, we are asking our residential customers to provide their views on tariff structures for their water services. Your input is very important and we will use this to inform our upcoming submission to our price regulator (IPART, www.ipart.nsw.gov.au) which sets the maximum prices that we can charge for water.

Please complete this questionnaire on behalf of your household. It will take around 15 minutes to complete. You do not need to know anything about pricing for these services. Background information is provided.

Published results will report on survey responses only in a grouped format, so that individuals' responses will not be identifiable.

If you have any technical problems with the questionnaire, please contact Hayden Evans at hevans@woolcott.com.au or call 92615221.

If you have enquiries about this project, please contact Sydney Water on 1800 627 687 or yoursay@sydneywater.com.au.

Section 1. Screener questions

First, some questions to make sure we have a good cross section of people.

1. Do you or anyone in your household work for any of the following industries/organisations?

Water supply or wastewater services

Market research

IPART (Independent Pricing and Regulatory Tribunal)

NSW Health in a role related to water quality regulation

NSW Environment Protection Authority

a. Yes **TERMINATE**

b. No

TERMINATE PAGE

Thank you for your patience in answering these questions. Unfortunately, we do not need you to participate in our research this time, but we sincerely appreciate your time and assistance today.

To keep up to date with opportunities to be involved in ongoing research and consultation, visit https://www.sydneywatertalk.com.au/

2. Which of the following best describes the water and wastewater bills you receive for the residence you live in?

   a. I get bills from Sydney Water

   b. I get bills from Sydney Water and from my body corporate

   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

   f. I don't pay a separate amount for water and wastewater **TERMINATE**

3. What is the postcode of your home address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

4. Are you… **CHECK QUOTAS**

   a. Male

   b. Female

   c. Non-gender-specific

   d. Prefer not to say

5. What is your age? **CHECK QUOTAS**
    a. Less than 18 years **TERMINATE**
    b. 18-29 years
    c. 30-39 years
    d. 40-49 years
    e. 50-59 years
    f. 60-69 years
    g. 70 years or more

6. Do you speak a language other than English at home? **SR. AUTOMATIC NEXT QUESTION.** C**HECK QUOTAS**
    e. No, English only 1 (skip to Q8)
    f. Yes 2

7. What is the main language spoken at home other than English? **SR**
    a. Arabic 1
    b. Australian Indigenous Languages 2
    c. Cantonese 3
    d. Croatian 4
    e. Dutch 5
    f. French 6
    g. German 7
    h. Greek 8
    i. Hindi 9
    j. Indonesian 10
    k. Italian 11
    l. Japanese 12
    m. Korean 13
    n. Lebanese 14
    o. Macedonian 15
    p. Mandarin 16

q. Polish 17
r. Punjabi 18
s. Serbian 19
t. Spanish 20
u. Tagalog 21
v. Turkish 22
w. Vietnamese 23
x. Other (please specify) 24
y. Prefer not to say 25

8. Are you of Aboriginal or Torres Strait Islander origin? **SR AUTOMATIC NEXT QUESTION**

a. No 1
b. Yes 2
c. Prefer not to say 3

9. Is the house in which you live… **SR**

a. Owned outright or with a mortgage 1
b. Being rented or occupied rent-free 2
c. Other (please specify) 3

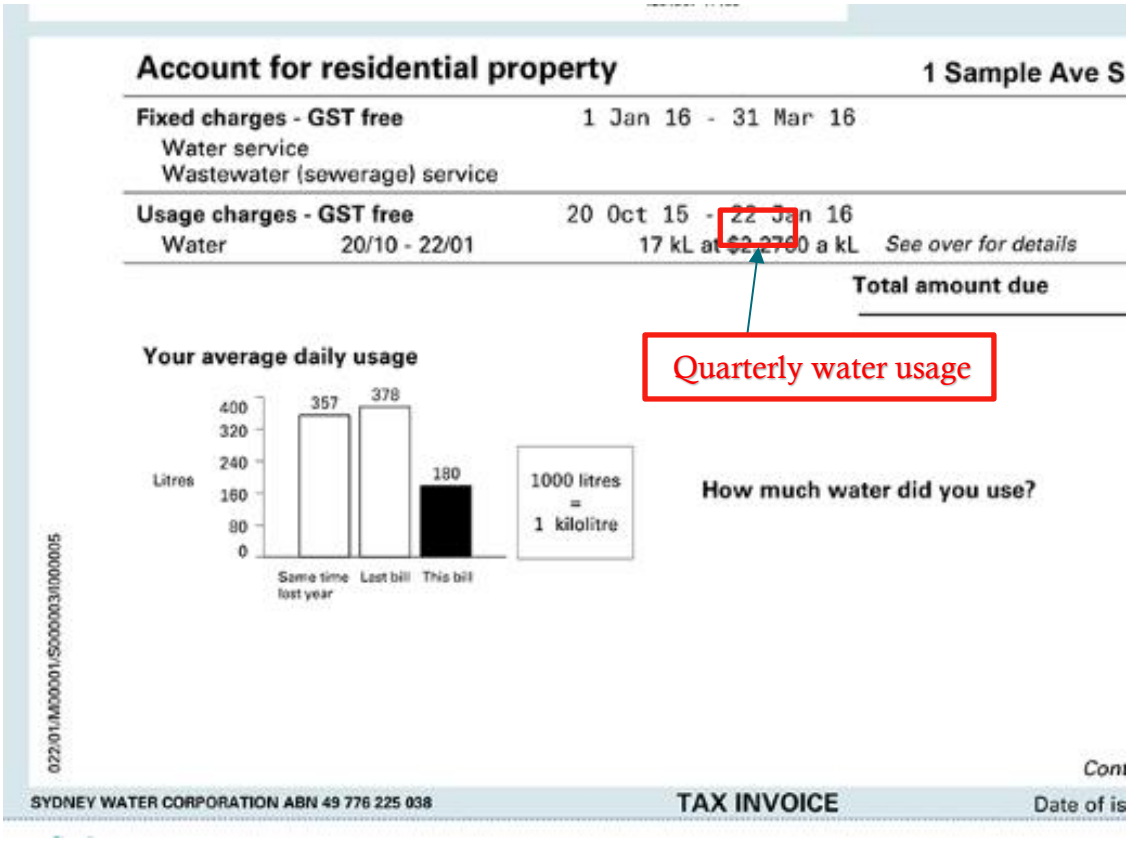
This questionnaire is about the prices that you pay for water and wastewater services.

It has three parts:

2. Background information on the different pricing elements and how these might affect your bill
3. Questions about how you think Sydney Water should rebalance the fixed and usage prices for water and wastewater services
4. Questions about you

Section 2. Water use characteristics

10. Do you have your most recent household water bill? **SR AUTOMATIC NEXT QUESTION**.
    a. Yes. **Proceed to question 11, skip q12.**
    b. No. **Proceed to question 12, skip q11.**



11. Please indicate the quarterly usage on the front of your bill:
    a. Insert number

Please give a rough estimate of the amount water that you use each quarter.

As a guide:

5. a small household, with no garden, uses around 25 kL each quarter
6. a typical household, uses around 50 kL each quarter
7. a large household, or a household with a garden, uses around 75 kL each quarter

12. The amount of water that I use each quarter is about:

Insert number

13. Compared to this time last year, do you think that your water bill has **SR AUTOMATIC NEXT QUESTION.**

a. Gone up
b. Stayed the same
c. Gone down
d. Don't know

14. Do you monitor your water usage and change your behaviour if your bill increases **SR AUTOMATIC NEXT QUESTION**.
    a. Yes
    b. No
    c. Not applicable

Section 2. Water price structure

Sydney Water charges customers for water and wastewater services. Prices for these services are set by IPART, an independent regulator (www.ipart.nsw.gov.au).

For water services, customers receive a:

8. fixed charge per household; and
9. charge that varies with the volume of water consumed by the household.

In this section Sydney Water is seeking your views on whether to increase (or decrease) the usage charge for water services. If there is an increase in the water usage charge, there will be a reduction in the fixed charge. Likewise, any decrease in the water usage charge will also need to have an increase in the fixed charge. **Sydney Water will receive the same revenue under all scenarios.**

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Information to help your decision

Some of the things customers consider when thinking about their preferred balance between fixed and variable charges include…

Bill certainty or ability to influence their bill

Some customers prefer a higher usage charge because they can change their behaviour to reduce bills. On the other hand, a higher fixed charge gives customers greater certainty and it is easier to plan household budgets.

Impacts on their own bill

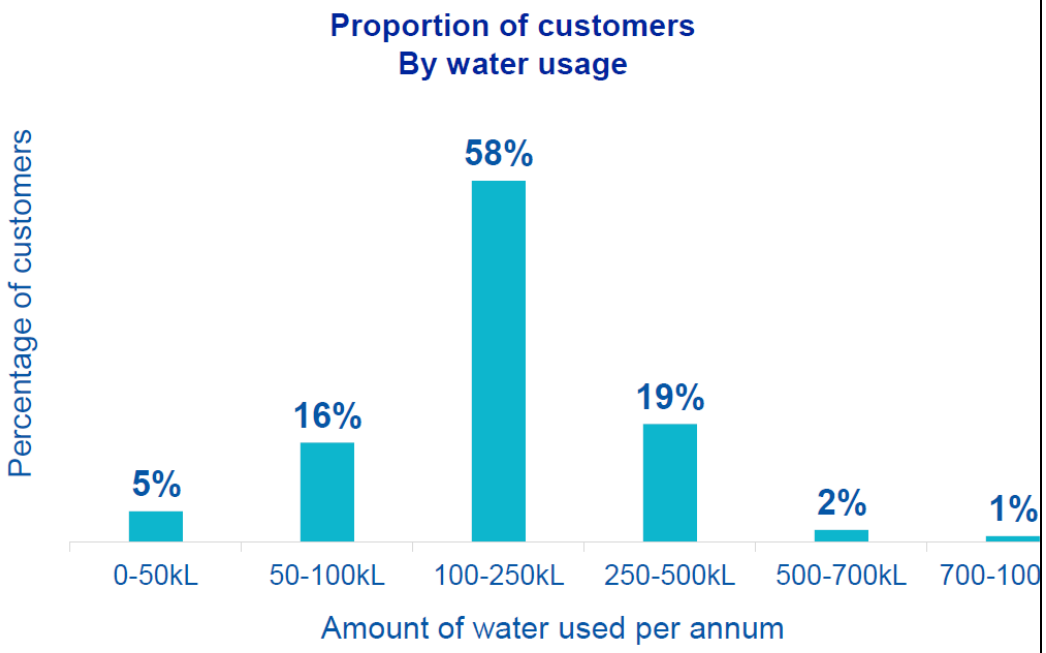
Increasing the usage charge will tend to:

10. decrease bills for households with lower water usage
11. increase bills for households with higher water usage

Impacts on others' bills

Water usage patterns vary across customers in Sydney. Households with large gardens are likely to use more water. Households with larger families are also likely to use more water. Wealthier households don't necessarily use more water.

The bar chart below show the proportion of Sydney Water's customers that consume different levels of water per annum.



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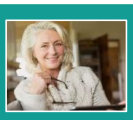
Changing the balance between fixed and usage prices will impact households differently, depending on their water usage. The price scenarios below are used to illustrate the bill impacts on different types of households.

	Current	Scenario A	Scenario B	Scenario C
Water usage charge	$2.08 per kilolitre	$1.40 per kilolitre	$1.80 per kilolitre	$2.20 per kilolitre
Water fixed charge	$80.67 per dwelling per year	$240.32 per dwelling per year	$145.53 per dwelling per year	$50.73 per dwelling per year

Annual water bill (excluding wastewater)

 Low consumption (100 kL per year)	$289	$380	$326	$271
 Typical apartment (160 kL per year)	$413	$464	$434	$403
 Typical house (220 kL per year)	$538	$548	$542	$535
 High consumption (350 kL per year)	$809	$730	$776	$821

Incentives for water usage

Research shows that a 10% increase in the usage charge results in a reduction in water usage of around 1%.

Sustained higher water use over a long period will lead to reduction in dam levels. Eventually this will lead to additional investments (such as a desalination plant) to maintain the security of the system. These additional investments will be reflected in higher water charges. The Metropolitan Water Plan for Sydney describes the strategy to manage Sydney's water supply (https://www.metrowater.nsw.gov.au/2017-metropolitan-water-plan).

The environmental impacts of water usage depend on how the water is being used. If customers use more water then it requires more energy and chemicals to produce this water. However, using water on gardens and parklands can cool urban environments, preventing 'urban heat islands'.

15. Please indicate your preferred balance between fixed and variable charges by moving the first 'slider' below.
    - Moving the slider to the left will increase the fixed charge and decrease the variable charge.
    - Moving the slider to the right will decrease the fixed charge and increase the variable charge.

For reference, Sydney Water currently charges a water usage price of $2.08 per kilolitre of water used and a fixed charge of $80.67 per dwelling per year.

The second slider shows quarterly water consumption so you can use this to see what the bill impacts are with different levels of water consumption. The consumption you gave earlier in the questionnaire was XXX per quarter.

When ready click on the double arrows to move to the next question.

16. What was your most important consideration when choosing your preferred balance between fixed and variable charges? **SR**.
    a. The expected impact on my bill
    b. Bill certainty (i.e. keeping bills predictable)
    c. Ability to influence my bill
    d. Impacts on low-income households
    e. Providing the right incentive for water usage
    f. Other (please specify)
17. What was your second most important consideration when choosing your preferred balance between fixed and variable charges? **SR**.
    a. The expected impact on my bill
    b. Bill certainty
    c. Ability to influence my bill
    d. Impacts on low-income households
    e. Providing the right incentive for water usage
    f. Other (please specify)
18. If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be? **SR AUTOMATIC NEXT QUESTION**.
    a. Change over one year
    b. Change over two years
    c. Change over four years
    d. I don't have a firm preference
19. If Sydney Water were to decrease the usage charge and increase the fixed charge, how gradual should the change be? **SR AUTOMATIC NEXT QUESTION**.
    e. Change over one year
    f. Change over two years
    g. Change over four years
    h. I don't have a firm preference

Section 3. Wastewater price structure

Wastewater, also known as sewage, is the water and anything that is added to it that comes from your sinks, bathrooms, showers, toilets and laundry that is discharged to Sydney Water's system.

For wastewater services, all customers receive a fixed charge which does not vary with the amount of wastewater discharged from your house. Within this fixed charge there is an assumed amount of wastewater usage of 150 kilolitres per year, this is the same for all residential customers (including those who live in houses and apartments).

Similar to water supply, Sydney Water wants to understand customer preference around wastewater charges, such as:

- should a different fixed charge apply for apartments and houses

- should we introduce a usage charge, so there would be a variable charge based on the volume of wastewater discharged from your house as well as a fixed wastewater charge

- or should we maintain the current approach and all residential customers pay the same fixed charge.

If a wastewater variable charge was introduced there would also be a reduction in the fixed charge for wastewater services, so that Sydney Water receives the same amount of revenue.

Wastewater would not be metered because it is costly and technically difficult.

Without a meter an estimate of a household's wastewater volume is needed. For example, Sydney Water could assume that 78% of water used is discharged to the wastewater system. This is known as the 'discharge factor'.

If a household wanted to reduce the variable portion of their wastewater bill they could reduce their water usage (i.e. the amount of water supplied to the house).

20. Do you think the wastewater part of your bill should include a variable component based on the volume of wastewater discharged from your house? **SR AUTOMATIC NEXT QUESTION**.

    a. Yes

    b. No, I prefer the current approach with a fixed charge only

    c. I don't have a firm preference

21. If the wastewater part of your bill remains fixed with no variable component, should the fixed amount be the same for apartments and houses? **SR AUTOMATIC NEXT QUESTION**.

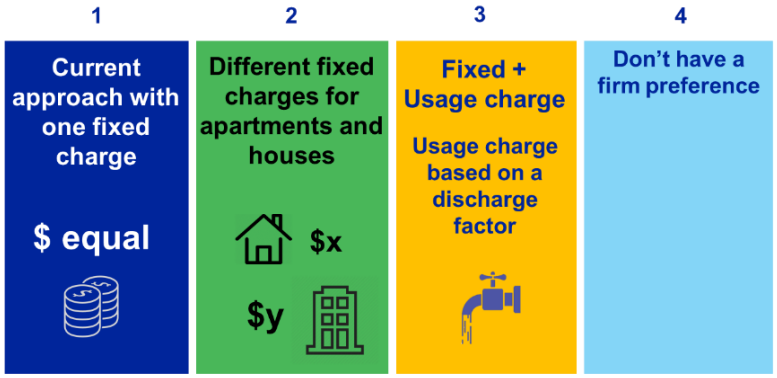
    a. All dwellings should pay the same fixed charge

    b. Houses should pay a higher fixed charge than apartments

    c. Houses should pay a lower fixed charge than apartments

    d. I don't have a firm preference

22. Overall, which wastewater pricing approach do you prefer? **SR AUTOMATIC NEXT QUESTION**.



23. What was your most important consideration when choosing your preferred approach? **SRAUTOMATIC NEXT QUESTION**.

    a. The expected impact on my bill

    b. Bill certainty / ability to influence my bill

    c. Impacts on low-income households

    d. Providing the right incentives for water usage

    e. Other (please specify)

Section 4. Household characteristics

And just some final questions to help us ensure we are speaking to a cross-section of Sydney Water customers…

24. How many people, including yourself, live in your household?

    a. One

    b. Two

c. Three
d. Four
e. Five
f. Six
g. Seven
h. More than Seven

25. Which of the following best describes your household?

a. Single person
b. Two or more single adults
c. Couple with no children
d. Family with children
e. Other

26. Is the house in which you live a

a. Separate house
b. Semi-detached, row or terrace house, townhouse
c. Flat, unit or apartment
d. Other dwelling

27. [**If 'Separate house' or 'Semi-detached, row or terrace house, townhouse'**] What is the size of your land?

a. Less than 150 square metres
b. Greater than 150 square metres but less than 300 square metres
c. Greater than 300 square metres but less than 500 square metres
d. Greater than 500 square metres but less than 800 square metres
e. Greater than 800 square metres but less than 1,200 square metres
f. Greater than 1,200 square metres
g. Don't know

28. Does your property have any of the following? (select all that apply)

a. A garden
b. A lawn
c. A pool
d. A rainwater tank

e. None of the above **SR**

29. What is your work status?

a. Working full time

b. Working part time/casually

c. Student

d. Not currently employed

e. Home duties

f. Retired

g. Other

30. What is your approximate annual household income before tax?

a. Less than $41,600

b. Between 41,600 and $78,000

c. Between $78,000 and $104,000

d. Between $104,000 and $156,000

e. More than $156,000

f. Do not wish to answer

31. Finally, do you have any further comments about your water and wastewater services that you do not feel are covered by this survey?

_____

_____

_____

_____

Thank you for participating in this survey. Your opinions are very important.

O Non-residential survey questionnaire

Project	Sydney Water CIPA
Engagement	Non-residential tariff structure
Sample	Businesses n=250 bill payers

Thank you for participating in this survey, which is being run by Woolcott Research and the Centre for International Economics on behalf of Sydney Water.

As part of Sydney Water's focus on putting customers at the heart of everything we do, we are asking our non-residential customers to provide their views on tariff structures for their water services. Your input is very important and we will use this to inform our upcoming submission to our price regulator (IPART, www.ipart.nsw.gov.au) which sets the maximum prices that we can charge for water.

Please complete this questionnaire on behalf of your business. It will take around 15 minutes to complete. You do not need to know anything about pricing for these services. Background information is provided.

Published results will report on survey responses only in a grouped format, so that individual responses will not be identifiable.

If you have any technical problems with the questionnaire, please contact Hayden Evans at hevans@woolcott.com.au or call 92615221.

If you have enquiries about this project, please contact Sydney Water on 1800 627 687 or yoursay@sydneywater.com.au.

Section 1. Screener questions

First, some questions to make sure we have a good cross section of businesses.

32. Which of the following best describes the water and wastewater bills you receive for your business?

    g. The business gets bills from Sydney Water

    h. The business gets bills from Sydney Water and from the body corporate for the premises

i. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent

j. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent

k. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill

l. The business does not pay a separate amount for water and wastewater **TERMINATE**

33. What is the postcode of your business address? **TERMINATE IF OUT OF AREA. CHECK QUOTAS.**

34. Approximately how many staff does your business employ… **CHECK QUOTAS**

a. Non employing/sole trader

b. 1-4 Employees

c. 5-19 Employees

d. 20-199 Employees

e. 200+ Employees **TERMINATE**

35. In which industry do you operate? **CHECK QUOTAS**

a. Accommodation and Food Services

b. Administrative and Support Services

c. Agriculture, Forestry and Fishing

d. Arts and Recreation Services

e. Construction

f. Currently Unknown

g. Education and Training

h. Electricity, Gas, Water and Waste Services

i. Financial and Insurance Services

j. Health Care and Social Assistance

k. Information Media and Telecommunications

l. Manufacturing
m. Mining
n. Other Services
o. Professional, Scientific and Technical Services
p. Public Administration and Safety
q. Rental, Hiring and Real Estate Services
r. Retail Trade
s. Transport, Postal and Warehousing
t. Wholesale Trade

This questionnaire is about the prices that you pay for water and wastewater services. You may also pay trade waste charges for your business. Trade waste prices are not covered in this survey.

It has two parts:

a. Background information on the different pricing elements and how these might affect your bill
b. Questions about if and how you think Sydney Water should rebalance the fixed and usage prices for water and wastewater

Section 2. Water use characteristics

36. Do you have the most recent water bill for your business premises? **SR AUTOMATIC NEXT QUESTION**.

c. Yes. **Proceed to question 6, skip q7.**
d. No. **Proceed to question 7, skip q6.**

37. Please indicate the quarterly water usage on the front of the bill:

b. Insert number kL

38. Please give a rough estimate of the amount water that you use each quarter.

The following table provides a guide of the water usage and meter sizes for different types of businesses which could help you to provide an estimate.

The amount of water that my business uses each quarter is about:

Insert number kL

Average water per quarter and typical meter sizes for business customers

Customer type	Type	Meter size	Average usage
		mm	kL/quarter
Industrial	Low e.g. tyre dealer	20	50
	Medium e.g. small food manufacturer, small brewery,	40	1,450
	High. E.g. Paper mill, large brewery, textile producer, commercial laundry	80	6,500
Industrial strata unit	Low e.g. equipment hire,	20	19
	Medium e.g furniture manufacturer, mechanic	25	23
	High e.g. micro brewery	50	8,000
Commercial	Low e.g. hairdresser, fish & chips shop, petrol station	20	78
	Medium e.g. small shopping centre, plaza, small club, pubs, market place, low rise office building, schools	40	1,675
	High. E.g High rise office building, large shopping centres, hotels, club, universities	80	5,250
Commercial strata unit	Low e.g newsagent, café, convenience store	20	33
	Medium e.g. fast food restaurants	25	45
	High e.g. large restaurant, function centre	40	525

39. Compared to this time last year, do you think that your water bill has SR AUTOMATIC NEXT QUESTION.

    e. Gone up

    f. Stayed the same

    g. Gone down

    h. Don't know

40. Do you monitor your water usage and change your behaviour if your bill increases SR AUTOMATIC NEXT QUESTION.

    d. Yes

    e. No

f. Not applicable

41. What area of your operation uses the most water?

_____
_

Section 2. Water price structure

Sydney Water charges customers for water and wastewater services. Prices for these services are set by IPART, an independent regulator (www.ipart.nsw.gov.au).

For water services, customers receive a:

c. fixed charge per property; and

d. usage charges that vary with the volume of water consumed by the property.

In this section Sydney Water is seeking your views on whether to increase (or decrease) the usage charge for water services. If there is an increase in the water usage charge, there will be a reduction in the fixed charge. Likewise, any decrease in the water usage charge will also need to have an increase in the fixed charge. **Sydney Water will receive the same revenue under all scenarios.**

Information to help your decision

Some of the things customers consider when thinking about their preferred balance between fixed and usage charges include…

Bill certainty or ability to influence their bill

Some customers prefer a higher usage charge because they can change their behaviour to reduce bills. On the other hand, a higher fixed charge gives customers greater certainty and it is easier to plan budgets.

Impacts on your own bill

Increasing the usage charge will tend to:

e. decrease bills for businesses with lower water usage

f. increase bills for businesses with higher water usage.

Impacts on others' bills

Water usage patterns vary across customers in Sydney, depending on the type of business being operated.

Different businesses will be impacted by a move toward changing the balance between fixed and usage prices. The price scenarios below are used to illustrate the bill impacts on different types of businesses.

Water price scenarios

	Current	Scenario A	Scenario B	Scenario C
Water usage charge	$2.08 per kilolitre	$1.40 per kilolitre	$1.80 per kilolitre	$2.20 per kilolitre
Water fixed charge 20mm	$20.19 per quarter	$60.08 per quarter	$36.38 per quarter	$12.68 per quarter
Water fixed charge 50mm	$126.05 per quarter	$375.50 per quarter	$227.39 per quarter	$79.27 per quarter
Water fixed charge 80mm	$322.70 per quarter	$961.28 per quarter	$582.12 per quarter	$202.92 per quarter

Quarterly Water bill (excluding wastewater)

Quarterly water bill (ex. wastewater)	Current	Scenario A	Scenario B	Scenario C
Strata unit (20mm meter, 25 kL/qtr)	$72	$95	$81	$67
Low user (20mm meter, 75 kL/qtr)	$176	$165	$171	$178
Medium user (50mm meter, 1675 kL/qtr)	$3 610	$2 721	$3 242	$3 764
High user (80mm meter, 6500 kL/qtr)	$13 843	$10 061	$12 282	$14 503

Incentives for water usage

For businesses, research shows that a 10% increase in the usage charge results, on average, in a reduction in water usage of around 2.6%.

Sustained higher water use over a long period will lead to reduction in dam levels. Eventually this will lead to additional investments (such as a desalination plant) to maintain the security of the system. These additional investments will be reflected in higher water charges. The Metropolitan Water Plan for Sydney describes the strategy to manage Sydney's water supply (https://www.metrowater.nsw.gov.au/2017-metropolitan-water-plan).

The environmental impacts of water usage depend on how the water is being used. If customers use more water then it requires more energy and chemicals to produce this water. However, using water on gardens and parklands can cool urban environments, preventing 'urban heat islands'.

42. Sydney Water currently charges a water usage price of $2.08 per kilolitre of water used and a fixed charge that depends on the water meter size. The fixed charge is $80.67 per property per quarter for a 20mm meter, $126.05 for a 50mm meter and $322.70 for an 80mm meter.

Please indicate your preferred balance between fixed and usage charges by moving the 'slider' below. Moving the slider to the left will increase the fixed charge and decrease the usage charge. Moving the slider to the right will decrease the fixed charge and increase the usage charge. The second slider shows quarterly water consumption so you can use this to see what the bill impacts are with different levels of water consumption. The consumption you gave earlier in the questionnaire was XXX per quarter. If you don't know your meter size, the following table provides a guide for meter sizes for different types of businesses [ADD TABLE FROM Q6]

When ready click on the double arrows to move to the next question.

a. Insert sliders as per residential survey and incorporate an input for meter size (the fixed charge equals the ordinary 20mm fixed charge x meter size (mm) squared divided by 400)

43. What was your most important consideration when choosing your preferred balance between fixed and usage charges? SR AUTOMATIC NEXT QUESTION.

    g. The expected impact on my bill

    h. Bill certainty (i.e. keeping bills predictable)

    i. Ability to influence my bill

    j. Impacts on other businesses

k. Providing the right incentive for water usage

l. Other (please specify)

44. What was your second most important consideration when choosing your preferred balance between fixed and usage charges? SR AUTOMATIC NEXT QUESTION.

g. The expected impact on my bill

h. Bill certainty (i.e. keeping bills predictable)

i. Ability to influence my bill

j. Impacts on other businesses

k. Providing the right incentive for water usage

l. Other (please specify)

45. If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be? SR AUTOMATIC NEXT QUESTION.

i. Change over one year

j. Change over two years

k. Change over four years

l. I don't have a firm preference

46. If Sydney Water were to decrease the usage charge and increase the fixed charge, how gradual should the change be? SR AUTOMATIC NEXT QUESTION.

a. Change over one year

b. Change over two years

c. Change over four years

d. I don't have a firm preference

Section 3. Wastewater price structure

Wastewater, also known as sewage, is the water and anything that is added to it that comes from your sinks, bathrooms, showers, toilets and laundry that is discharged to Sydney Water's system.

For wastewater services, non-residential customers receive both:

g. a usage charge applied to the volume of wastewater discharged to the sewer

h. a fixed charge that does not vary with the amount of wastewater discharged from your business.

Businesses' wastewater bills will depend on the size of the meter (which determines the fixed charge) and the calculated volume of wastewater discharged to the sewer. For smaller and medium size businesses the volume discharged to the sewer system is calculated as a percentage of the metered volume of water consumed. In some instances, larger customers may have a separate meter to measure the volume of wastewater discharged.

Similar to water supply, Sydney Water is investigating the possibility of changing the balance between the usage charge and the fixed wastewater charge. Under all of the alternative fixed and usage charges Sydney Water receives the same amount of revenue.

For the majority of small businesses, wastewater volume is not metered because it is costly and technically difficult. Without a meter an estimate of a business' wastewater volume is needed. For example, Sydney Water could assume that the amount of wastewater discharged to the wastewater system is equal to 78% of the amount of water used by the business. This is known as the 'discharge factor'. Sydney Water applies standard discharge factors to different types of businesses.

Information to help your decision

The things customers consider when thinking about their preferred balance between fixed and usage charges for wastewater are similar to those covered earlier in the survey for water pricing.

Wastewater bill impacts depend not only on water usage and meter size, but also on the discharge factor applied by Sydney Water to your business.

A number of scenarios of alternative usage and fixed prices, as well as the estimated bill impacts, is presented below.

Alternative pricing scenarios

	Current	Scenario A	Scenario B	Scenario C
Wastewater usage charge	$1.16 per kilolitre	$0.50 per kilolitre	$0.80 per kilolitre	$1.50 per kilolitre
Wastewater fixed charge 20mm	$156 per quarter	$162 per quarter	$159 per quarter	$153 per quarter
50mm	$748 per quarter	$911 per quarter	$837 per quarter	$661 per quarter
80mm	$1847 per quarter	$2303 per quarter	$2097 per quarter	$1604 per quarter

Quarterly wastewater bill

47. Sydney Water currently charges a wastewater usage price of $1.16 per kilolitre of wastewater discharged to the sewer and a fixed charge that depends on the meter size. The fixed charge is $156 per business per quarter for a 20mm meter, $748 for a 50mm meter and $1,847 for an 80mm meter. Please indicate your preferred balance between fixed and usage charges by moving the 'slider' below. Moving the slider to the left will increase the fixed charge and decrease the usage charge. Moving the slider to the right will decrease the fixed charge and increase the usage charge:

    a. **Insert a slider, as per residential including inputs for meter size and discharge factor. Please automatically add meter size and baseline consumption from previous questions.**

48. What was your most important consideration when choosing your preferred balance between fixed and usage charges? SR AUTOMATIC NEXT QUESTION.

    a. The expected impact on my bill
    b. Bill certainty (i.e. keeping bills predictable)
    c. Ability to influence my bill
    d. Impacts on other businesses
    e. Providing the right incentive manage wastewater discharge

f. Other (please specify)

49. What was your second most important consideration when choosing your preferred balance between fixed and usage charges? SR AUTOMATIC NEXT QUESTION.

    i. The expected impact on my bill

    j. Bill certainty (i.e. keeping bills predictable)

    k. Ability to influence my bill

    l. Impacts on other businesses

    m. Providing the right incentive manage wastewater discharge

    n. Other (please specify)

50. If Sydney Water were to increase the usage charge and decrease the fixed charge, how gradual should the change be? SR AUTOMATIC NEXT QUESTION.

    a. Change over one year

    b. Change over two years

    c. Change over four years

    d. I don't have a firm preference

51. If Sydney Water were to decrease the usage charge and increase the fixed charge, how gradual should the change be? SR AUTOMATIC NEXT QUESTION.

    a. Change over one year

    b. Change over two years

    c. Change over four years

    d. I don't have a firm preference

52. Finally, do you have any further comments about your water and wastewater services that you do not feel are covered by this survey?

_____
_____
_____
_____

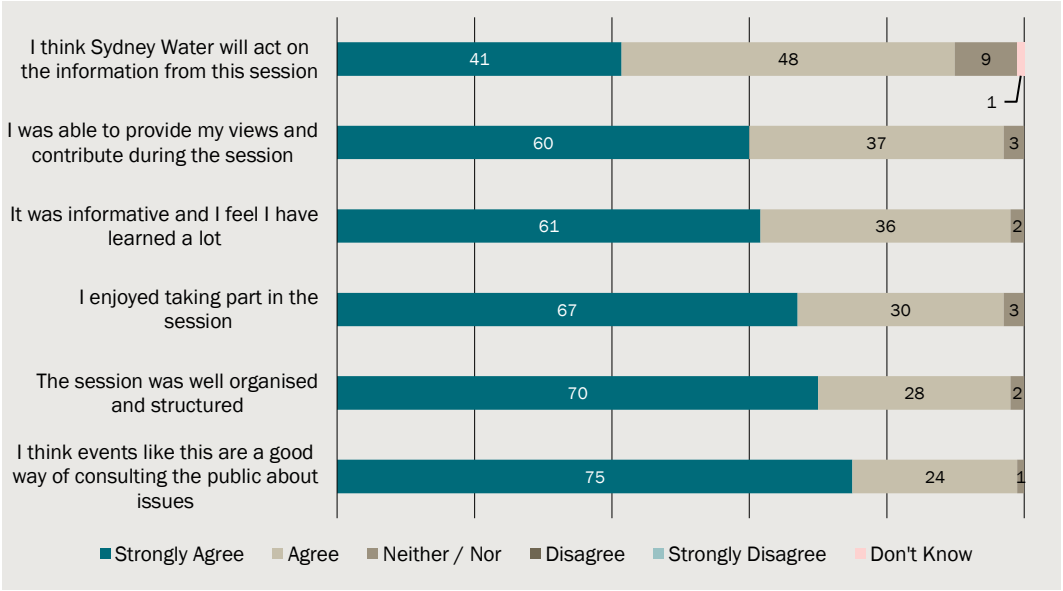
Thank you for participating in this survey. Your opinions are very important.

P Evaluation

Similar to Phase 1, at the end of the forums participants were given a questionnaire to enable them to provide feedback on the event. The questionnaire included a list of statements and they were asked the extent to which they agreed with each one.

The evaluation by participants was again very positive, with 99 per cent agreeing that events like this are a good way of consulting the public about issues (75 per cent strongly agreeing). Some 98 per cent believed that the session was well organised and structured and 97 per cent agreed that they enjoyed taking part in the session. Some 97 per cent stated that they were able to provide their views and contribute during the session and a similar number felt it was informative and that they learned a lot. Although to a lesser extent, the majority also believed that Sydney Water would act on the information from the session (89 per cent).

P.1 Forum evaluation by participants



Q. Based on your experience today, please indicate whether you Strongly Agree, Agree, Disagree, Strongly Disagree or Neither Agree or Disagree with each of the following statements...

Base All respondents n=529

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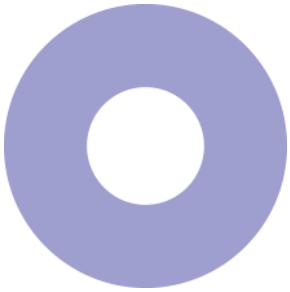
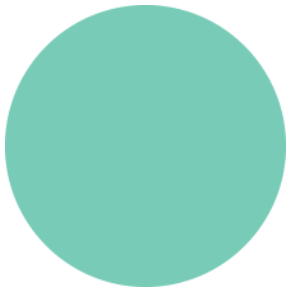



SW231 06/19

Appendix 3D

CIPA Phase 3 report

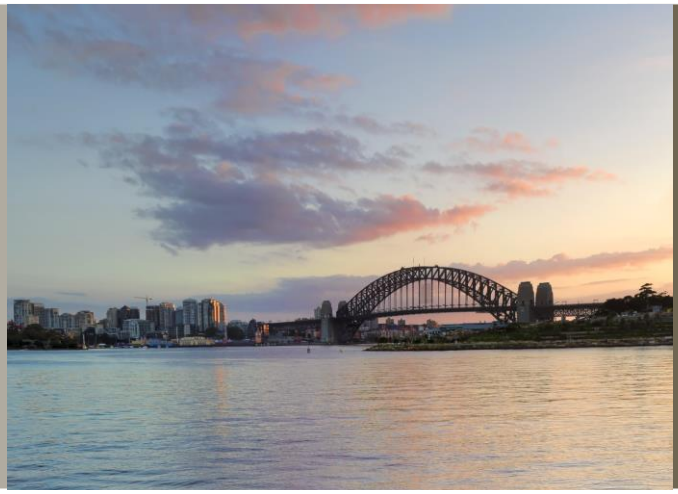
Price Proposal 2020–24

COMMERCIAL IN CONFIDENCE

FINAL REPORT

Bringing it all together

Customer-informed IPART submission (CIPA) Phase 3



Prepared for
Sydney Water

11 February 2019

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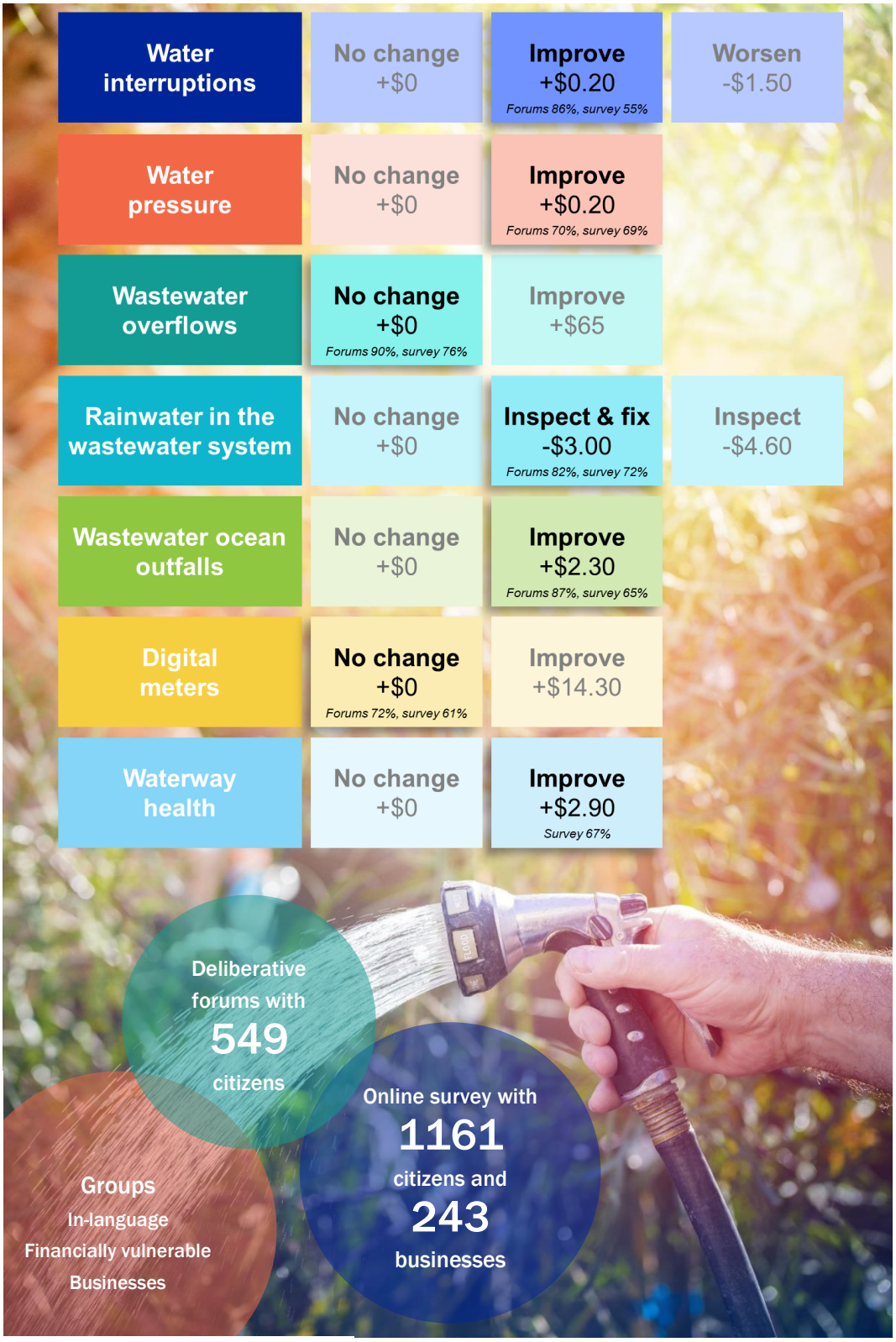
Water interruptions
No change +$0
Improve +$0.20
Forums 86%, survey 55%
Worsen -$1.50
Water pressure
No change +$0
Improve +$0.20
Forums 70%, survey 69%
Wastewater overflows
No change +$0
Forums 90%, survey 76%
Improve +$65
Rainwater in the wastewater system
No change +$0
Inspect & fix -$3.00
Forums 82%, survey 72%
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Wastewater ocean outfalls
No change +$0
Improve +$2.30
Forums 87%, survey 65%
Digital meters
No change +$0
Forums 72%, survey 61%
Improve +$14.30
Waterway health
No change +$0
Improve +$2.90
Survey 67%
Deliberative forums with 549 citizens
Online survey with 1161 citizens and 243 businesses
Groups
In-language
Financially vulnerable
Businesses

1 Introduction

Background

Sydney Water is committed to improving its overall customer value proposition by putting customers at the heart of everything it does. Sydney Water has promised:

> …to make every one of our customers proud by giving them a voice in what we do, and playing our role in creating liveable communities.
>
> This means we will involve customers in the big decisions that impact them…[1]

Many of the big decisions impacting the prices and service levels experienced by customers are made in the context of the operating licence and price reviews undertaken by the Independent Pricing and Regulatory Tribunal (IPART). Sydney Water wants to involve customers in developing the business plans and proposals that it submits to these reviews and in developing other business strategies.

Sydney Water planned three phases of customer engagement for 2018 to inform its submissions to IPART in relation to the operating licence to apply from 2019 and the price determination to apply from 2020. The first phase involved a series of deliberative forums, discussion groups, interviews and online surveys conducted during February and March 2018. The second phase involved a similar set of engagement activities, conducted in August and September 2018, designed to understand customer preferences for pricing structure and to measure customer willingness to pay for changes in several aspects of the services provided by Sydney Water.

This report details the method and results from the third phase of customer engagement, conducted in November and December 2018. The main purpose of this phase of engagement is to confirm the preferred set of project/program options to be included in Sydney Water's plans for 2020-2025 in the context of different scenarios for the overall impact on customer bills.

1 Sydney Water 2016, Sydney Water Customer Toolkit, December, p. 5.

2 How we talked with customers

- **In total, we engaged 2 037 customers in Phase 3 – 1 779 citizens and 258 businesses**

Summary of engagement activities

The engagement employed a range of activities to ensure an inclusive and accessible approach that gives all customers a voice, and to ensure the results were robust to the engagement technique:

- One pilot deliberative forum with Sydney Water staff at Potts Hill
- Seven deliberative forums with between 70-100 citizens participating in each forum (549 in total), held in:
  - Hornsby;
  - Wollongong;
  - Hurstville;
  - Campbelltown;
  - Penrith;
  - Parramatta; and
  - CBD.
- Six in-language discussion groups, each with 8-10 people (55 in total)
- Two discussion groups with financially-vulnerable customers, each with 7-8 people (14 in total)
- Two discussion groups with small-to-medium businesses, each with 7-8 people (15 in total)
- An online survey, completed by
  - 1 161 citizens; and
  - 243 businesses.

Deliberative forums

Dates and locations

A pilot deliberative forum was held with staff in Potts Hill on 2 November 2018. Seven deliberative forums were held in November 2018 at the locations set out in table 2.1.

2.1 Deliberative forums

Location	Venue	Date	Returning participants	Total participants
Hornsby	Hornsby RSL	12/11/2018	47	88
Wollongong	WIN Stadium	15/11/2018	57	88
Penrith	Penrith Panthers	19/11/2018	63	75
Hurstville	Club Central Hurstville	20/11/2018	44	72
Campbelltown	Campbelltown Catholic Club	26/11/2018	56	83
Parramatta	Parramatta Novotel	27/11/2018	52	75
CBD	Sydney Tattersalls Club	29/11/2018	46	68
Total			365	549

Source: CIE/Woolcott

The return rate was 66 per cent for the forums overall.

Summary statistics on the characteristics of participants are provided in Chapter 4.

Approach

The forums consisted of a mix of round table discussions, presentations/speakers from the front and participant response sessions from tables. Participants spent most of the time working in small groups on tables of eight to ten.

The forums nearer the CBD ran from 5.30pm to 9.00pm on weekday evenings with those further away running from 6.00pm-9.30pm to enable those who work in the city to travel back to their suburb to attend. These timings allowed those with a full-time job to attend the forums and provided enough time for the provision of detailed information so that participants were able to develop a clear understanding of the issues and of the options facing them.

Woolcott Research provided a lead facilitator, Ian Woolcott (who chaired the sessions and managed the flow and timing), eight table facilitators and a support staff member. The Woolcott Research table facilitators ensured that all issues were covered in the discussions on tables and that everyone's views were heard and captured. They ensured that no one participant dominated the discussion at their table and that everyone had a chance to have their say and provide feedback. They also probed into issues that arose within the discussion to ensure that sufficient detail was gained. The facilitator also ensured that all citizens understood how to participate in the whole-of-forum polling process on key questions at several points during the forums.

Laptops were used at each table for facilitators to capture the table's discussions. Each laptop was set up to offer prompts to guide the discussion and time-coded storage of group discussion summaries, which were downloaded into grids for the analysis.

Keypad polling was also included whereby participants were each given a handheld device that was used to answer multiple-response questions shown on screen, with results given in real time.

Each table included a mix of demographics in terms of age, gender and language.

Sydney Water staff presented information to the forum and were on hand to provide answers to any questions participants had about the issues.

The content of the forums is described in detail in Chapter 3.

Discussion groups

Dates and locations

Ten discussion groups were held during November 2018 with the customer segments set out in table 2.2.

2.2 Discussion groups

Customer segment	Location	Date	Participants
Cantonese	Eastgardens	25/11/18	8
Mandarin	Eastgardens	25/11/18	8
Hindi	Epping	17/11/18	10
Greek	Eastwood	18/11/18	9
Arabic	Carramar	15/11/18	10
Vietnamese	Chipping Norton	17/11/18	10
Financially vulnerable	Parramatta	19/11/18	7
Financially vulnerable	CBD	02/12/18	7
Small-medium enterprise	Parramatta	19/11/18	8
Small-medium enterprise	CBD	02/12/18	7
Total			84

Source: CIE/Woolcott

Summary statistics on the characteristics of participants are provided in Chapter 4.

Approach

Although the forums involved people from diverse backgrounds, including citizens speaking a language other than English at home (LOTE), small-medium enterprises (SMEs) and those on low incomes, it is best practice for engagement programmes to include supplementary engagement with these groups, to ensure their voices are heard.

Six 'in-language' group discussions were conducted with people who did not speak English well or at all. These were conducted with those who speak Mandarin, Cantonese, Arabic, Vietnamese, Hindi and Greek in locations with large populations of these speakers. These languages were chosen because they have the highest number of speakers in the Greater Sydney area. They were conducted by bilingual researchers in the participants' first language by the Cultural and Indigenous Research Centre Australia (CIRCA). They were held in settings where participants were comfortable and able to speak freely.

Two group discussions were conducted with customers in financial hardship, one in Parramatta and one in the CBD. Customers who had had difficulty paying bills (i.e. had asked for an extension) in the last 12 months and who held a health/low income card were recruited for these sessions.

Two discussion groups were also conducted with small and medium size enterprises (SMEs). The participants were the water decision makers in the business, i.e. those who would have a role in interacting with Sydney Water either if there was a water interruption or wastewater overflow, or by paying water bills.

Woolcott Research and Engagement facilitated the financial hardship and SME groups. These groups lasted for approximately 1.5 hours and were conducted at 6pm and 7.30pm on a weekday evening.

The content of the discussion groups is described in detail in Chapter 3.

Online survey

Phase 3 included as online survey, with separate versions for citizens and small to medium businesses. The sampling, scripting and hosting were provided by Pureprofile.

The survey was 10-15 minutes in length. It was live from 16 November 2018 to 3 December 2018. It was completed by 1161 citizens and 243 businesses.

Summary statistics on the characteristics of participants are provided in Chapter 4.

The content of the survey is described in detail in Chapter 3.

3 What we talked with customers about

Overview of Phase 3 topics

The purpose of Phase 3 of the engagement program was to provide feedback on Phase 2 results and test customers' preferred package of options for system performance and discretionary projects in the context of the overall impact on customer bills in 2020-2025.

Reactions to price structure proposals

In the deliberative forums and discussion groups, participants were presented with results from the Phase 2 engagement on price structure and Sydney Water's proposed approach to price structure for 2020-2025, which had been informed by the Phase 2 engagement. This proposed approach involved a slight increase in the water usage price to $2.13/kL from $2.08/kL and retaining the wastewater structure of the same fixed charge applied to all residential customers. Participants were then asked to indicate the extent to which they support these proposals.

Service options in the context of the total bill

Approach used in deliberative forums and discussion groups

The deliberative forums and discussion groups involved working through six topics – water interruptions, repeated water pressure failures, wastewater overflows, untreated wastewater ocean outfalls, rainwater in the wastewater system, and digital meters. For each topic, Sydney Water presented information and price-service options, participants discussed the options on their table and recorded their initial preference on an activity sheet designed to enable calculation of the overall bill impact. Keypad voting was also conducted on participants' initial preference, with results displayed immediately.

Once this process had been conducted for all six topics, participants were given time to calculate the overall bill impact from their chosen options and to consider any changes on their activity sheet. Participants' final choices were collected using keypad voting. Sydney Water then explained that due to external factors, such as interest rates, water bills could increase or decrease in 2020. Participants then discussed and considered whether they would change any of their choices if their annual bill was either increasing by $100 or decreasing by $100 when Sydney Water continues doing what it has been doing. The choices under these two alternative scenarios were then collected using keypad voting.

For further detail, see appendices A to N.

Approach used in the online survey

The online survey addressed each topic in turn and then included a 'bill calculator' question to confirm preferences for the overall package of options. On each topic the questionnaire included a page of background information, including photos, and then a page outlining the options and seeking the respondent's initial preferred option, noting that there would be opportunity to change the choice later in the survey.

The 'bill calculator' question included all of the options for each topic, pre-filled based on earlier responses, and showed the estimated bill from 2020 for the respondent based on their estimated existing bill, their chosen options, and an adjustment for external factors (figure 3.1). This adjustment for external factors was either a $100 decrease, no change or a $100 increase and was allocated to respondents to maintain a similar number of survey completions for each level. The adjustment was explained prior to the question.

The waterway health improvement project material was included only for respondents in postcodes comprising a large majority of Sydney Water stormwater customers.

For further detail, see appendix P.

3.1 The 'bill calculator' question

Data source: CIE

Service options

Water interruptions

Sometimes, Sydney Water needs to turn off mains water supply to fix water pipes.

While the water supply is turned off, customers in the affected area won't be able to get water from the taps on their properties. For example, you they not be able to:

- pour a glass of drinking water;
- flush the toilet (after it's been flushed once);
- rinse or wash dishes or clothes; or
- have a shower.

Sometimes, Sydney Water will give customers warning about a water interruption by sending a letter beforehand. On other occasions, the work will be urgent and Sydney Water will not be able to warn customers about an interruption.

There are three options.

The chance of interruptions happening to a customer under each option is described as the number of properties in 1000 that would experience an interruption each year. On average, there are around 3000 properties in a Sydney suburb, so 1000 properties is around one third of a suburb.

3.2 Water interruptions options

	Option A No change	Option B Improve	Option C Worsen
	Continue what we are doing	New technology and more notice	Repair pipes more before replacing them
	No change in your water bill	You pay an extra **$0.20** each year	You save **$1.50** each year
Interruptions without notice (5+ hours)	20 in 1000 properties	16 in 1000 properties	24 in 1000 properties
Interruptions without notice (less than 5 hours)	100 in 1000 properties	99 in 1000 properties	140 in 1000 properties
Interruptions with notice	20 in 1000 properties	21 in 1000 properties	10 in 1000 properties

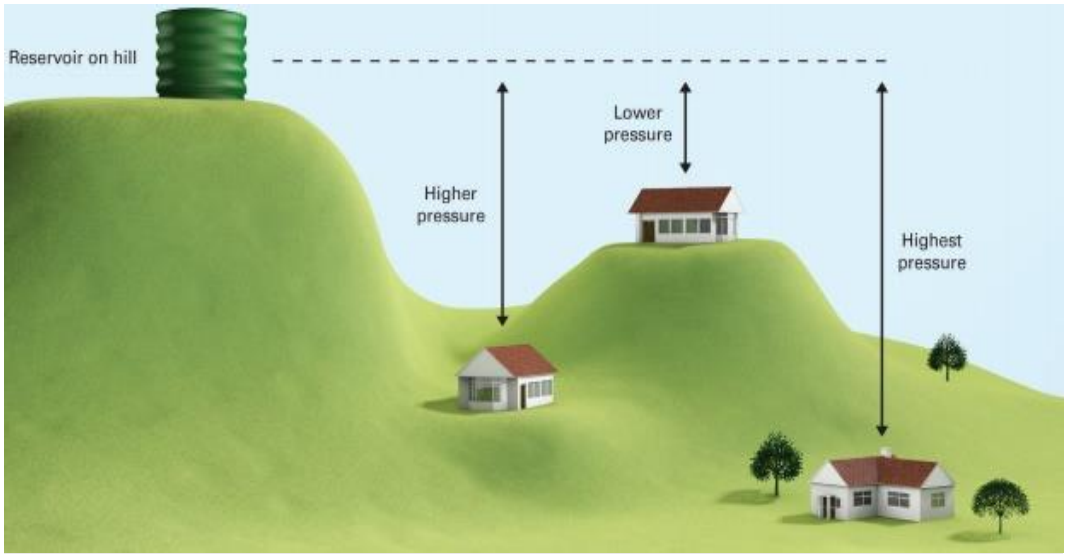
Note: In the forums and groups, the bottom two rows of the table were omitted and covered verbally

Data source: CIE/Woolcott

Water pressure

Water reservoirs are located at high points. Water gets from reservoirs to a customer's property using gravity. Water pressure varies at different locations depending on how far the property is from a water reservoir and the elevation of your property in relation to the reservoir.

3.3 Water pressure illustration



Data source: Sydney Water

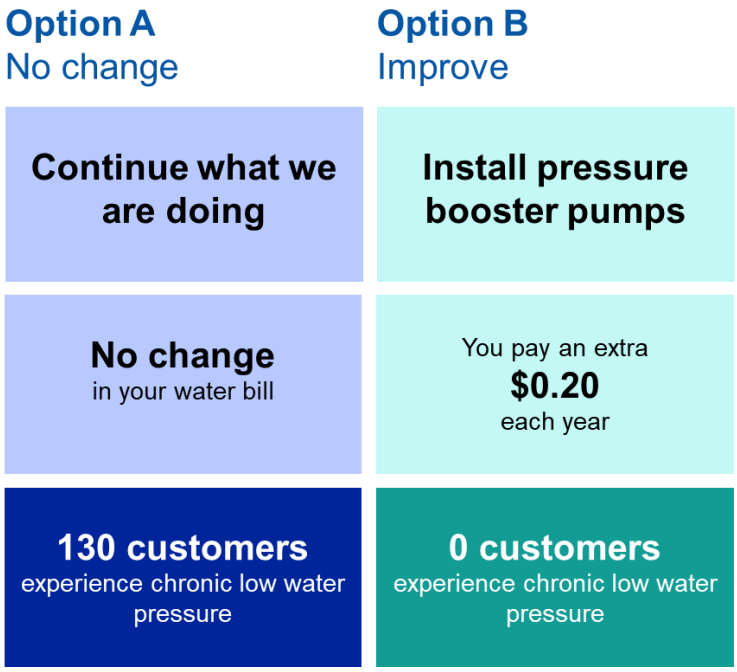
Water pressure in our system can fall when people are using water or when a pipe breaks. In areas with lower pressure, this may result in slow flow of water from your taps. You may notice:

- taking a few minutes to fill a bucket
- only a trickle of water coming from second-floor taps/shower
- not being able to use water in more than one place in the home (e.g. not being able to shower while using the washing machine).

There are around 130 properties in Sydney, typically in rural or low-density areas, that experience these low-water-pressure events on a regular basis. In some areas these events occur on an almost daily basis.

Sydney Water can improve water pressure to these 'worst-served' properties by investing in water pressure booster pumps.

3.4 Water pressure options



Data source: CIE/Woolcott

Wastewater overflows

Wastewater is the used water that goes down sinks, toilets and drains. When the wastewater system becomes blocked, for example due to tree roots, wastewater can overflow from the manholes that are used to access the sewerage pipes or from a grate in a customer's yard.

In rare cases (about 1 in 200), wastewater may overflow within a building, for example from the shower drain.

Wastewater is mostly water, but it can contain viruses, bacteria and other organisms that are harmful to humans, animals and the environment. In the event of an overflow customers would need to stop using your toilets, sinks and other drains and keep away from the affected area until the blockage has been cleared and the area has been thoroughly cleaned by Sydney Water staff.

Wastewater overflows can happen at any time of day. It typically takes about five hours before Sydney Water has unblocked the pipe and cleaned the affected area.

There are two options. Sydney Water can't offer an option with a bill decrease, because if they spend less on inspecting wastewater pipes, they would need to spend much more reacting to blocked pipes.

3.5 Wastewater overflows options

Data source: CIE/Woolcott

Rainwater in the stormwater system

Rainwater gets into the wastewater system via faults or disrepair in private plumbing, including:

- downpipes being connected to the wastewater system instead of the stormwater system; and
- cracked pipes running from customer premises to our wastewater pipes.

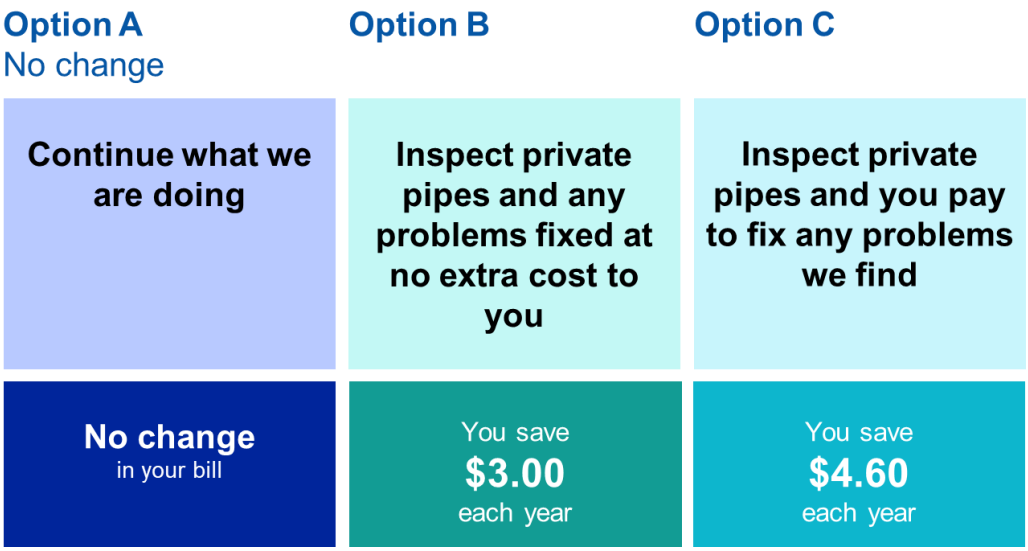
This can cause wastewater overflows on properties further down the system. Sydney Water has to build bigger pipes and storages to stop this happening. Building this infrastructure comes at a cost.

It would be cheaper to fix the problems with plumbing on customers' properties. This would involve Sydney Water inspecting customer plumbing.

The average cost of fixing any problem Sydney Water finds would be around $8 500. One option would be to recover this cost from all customers through Sydney Water prices. Another option would be for the individual customers with faulty plumbing to pay the cost themselves. Many of these customers would be unaware of the problem.

There are three options.

3.6 Inspection program options



Data source: CIE/Woolcott

Untreated wastewater ocean outfalls

Most of Sydney's wastewater is treated and then safely released deep in the ocean, but there is one area in Sydney where the wastewater is not treated. Instead, it is released directly into the ocean at three locations, or as we call them "outfalls", at the bottom of cliffs along Sydney's coastline. Built between 1916 and 1936, this is the only wastewater system in New South Wales that that puts untreated wastewater into the ocean 365 days of the year.

Every day, these three outfalls put four Olympic swimming pools' worth of untreated wastewater into the ocean, along with 2-3 wheelie bins' worth of plastics and hygiene products.

Despite this, water quality testing that occurs every six days at recreational areas near the outfalls continuously shows good water quality. The pollutants are in a relatively small area of ocean near the outfalls.

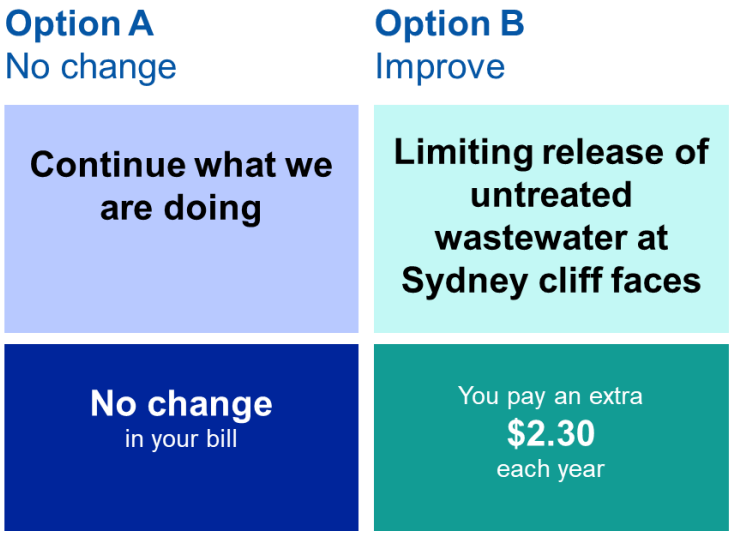
There are two main problems caused by the raw wastewater outfalls:

- Public health risks
  - Around 2000 people visit the affected areas each year for spear fishing, rock fishing and swimming
  - Around 300 people have direct contact with pollutants through organised swim and paddle events
- Ecosystem impacts
  - Degraded ocean floor habitat
  - Increased algae
  - Floating rubbish
  - A bad smell
  - Wastewater visible 75% of the time, including oil and grease on top of the water

Sydney Water can reduce these public health and ecosystem impacts by investing in new infrastructure to divert the untreated wastewater into another part of the network where it will be treated.

This investment will ensure that the standard of the wastewater system in the area is in line with the rest of Sydney. It will mean that in the future the outfalls will only operate as emergency release valves - meaning that diluted untreated wastewater may still be released into the ocean when the system cannot cope with the volume of rainwater that gets into the pipes.

3.7 Untreated wastewater ocean outfalls options



Data source: CIE/Woolcott

Digital meters

Unlike traditional meters, which are read in person each quarter, digital meters can provide customers with more frequent information about water usage on their property. This could be hourly data, updated once a day.

Digital meters would be read automatically, meaning we wouldn't need to enter customers' properties.

As part of any program to install digital meters, customers would be able to choose whether to get the following automated notifications from Sydney Water via SMS to your phone (or via email):

- Leak alerts
- High use notifications
- Bill predictions
- Check-in alerts

Sydney Water could also provide a mobile phone app or website where customers could see more detailed information, for example:

- Hourly usage data

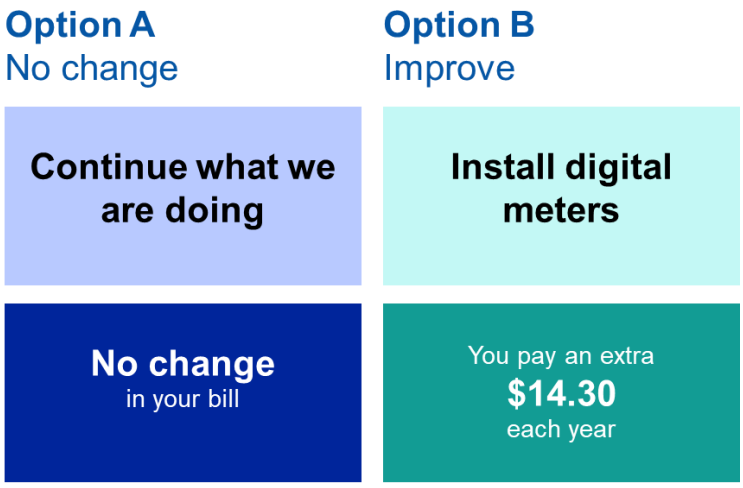
- Usage comparisons to similar types of properties

These features could help customers to:

- identify hidden leaks
- avoid unexpected changes in quarterly bills
- catch watering systems that have been left on
- find out when water use is zero for an elderly relative.

There are two options.

3.8 Digital metering options



Data source: CIE/Woolcott

Waterway health improvement program

Stormwater pollution affects the health of creeks and rivers in Sydney. Sydney Water is considering a program to improve waterway health across Sydney (in the catchments of the Georges, Cooks and Parramatta Rivers).

As part of the program, Sydney Water would:

- Plant and maintain native vegetation in open spaces and near creeks and waterways
- Create and maintain wetlands near stormwater channels
- Construct recreation facilities such as bicycle and pedestrian paths, seating and shelters, boardwalks and viewing platforms at these locations
- Install trash racks and booms in waterways to collect litter

Over time, this would increase the amount of river length that supports healthy populations of fish and birds.

There are two options.

3.9 Waterway health options

	Option A No change	Option B Improve
	Continue what we are doing	Undertake a waterway health improvement program
Your bill	No change in your water bill	You pay an extra $2.90 each year
Length of waterways in good health in 30 years	35 of 362 kilometres	36 of 362 kilometres
Native vegetation planting (including wetlands)	5 hectares	10 hectares
Recreation facilities	10 sets	18 sets
Rubbish and litter removed each year	80 truck loads	130 truck loads

Data source: CIE/Woolcott

4 Who we talked with

Approach

This project was designed to cater for both the scale and diversity of Sydney Water's customer base. The following groups were targeted for engagement:

- Citizens: anyone who uses Sydney Water's products or services, including:
  - LOTE citizens; and
  - Financially vulnerable citizens.
- Businesses: any business that uses Sydney Water's products or services, including small-medium enterprises.

Importantly, citizens and businesses may be property owners that pay Sydney Water bills or they may be tenants that do not directly pay bills.

The techniques used to engage each group are shown in table 4.1.

4.1 Customer segmentation

	Citizens other	Citizens LOTE	Citizens financially vulnerable	Small-medium business
Deliberative forums	✓	✓	✓	
Discussion groups		✓	✓	✓
Online survey	✓	✓	✓	✓

Source: CIE/Woolcott

How we recruited participants

Deliberative forums

Participants from Phases 1 and 2 of the engagement were invited back for Phase 3. The return rate was 66 per cent overall.

Recruitment for the forums took place up to two-three weeks before each forum. Following recruitment of the Phases 1 and 2 attendees, fresh participants were recruited through stratified random sampling from the areas surrounding the forum locations.

Individual quotas were set for each location, for age, gender, LOTE and ATSI. The quotas for each forum are provided below.

4.2 Recruitment quotas for deliberative forums

	18-44	45-64	65+	Male	Female	LOTE	Non-LOTE	ATSI	Non-ATSI
	%	%	%	%	%	%	%	%	%
Campbelltown	51	33	16	49	51	35	65	3	97
CBD	57	27	16	49	51	33	67	1	99
Hornsby	42	36	22	48	52	26	74	0	100
Parramatta	54	30	16	50	50	56	44	1	99
Hurstville	48	32	20	49	51	46	54	1	99
Penrith	49	34	17	49	51	14	86	4	96
Wollongong	44	33	23	49	51	14	86	3	97
Total	51	31	18	49	51	37	63	2	98

Source: CIE/Woolcott

For the fresh recruitment, people were telephoned at random (primarily through fixed line, but some mobile) and asked for their interest in attending, then those interested completed a short screening questionnaire. For quotas where there were lower responses, some participants were also recruited though market research recruiters and Facebook. Those with personal or professional connections to Sydney Water were screened out; i.e. if they or any immediate members of their family, worked for Sydney Water, any other water or wastewater utility company, for IPART or in a water quality related role with NSW Health or NSW Environment Protection Authority.

Confirmation telephone calls were made in the week leading up to each forum and followed up by email. Over a hundred participants were recruited for each forum.

All participants received $100 for their participation, to cover any out-of-pocket expenses, and were provided with a light dinner and dessert.

Discussion groups

Similar to the forums, those from Phase 1 and 2 were invited back for Phase 3.

The LOTE discussion groups were recruited by Cultural and Indigenous Research Australia (CIRCA). The groups consisted of people who did not speak English or did not speak it well and a mix of ages and genders. Again, those from Phase 1 were invited back for the Arabic and Mandarin groups (the other LOTE groups were not conducted in Phase 1). CIRCA bilingual consultants recruited the participants, who were contacted through individual phone calls by the consultant.

All residential participants (LOTE and financial hardship groups) received $80 with the SMEs receiving $125, to cover any out-of-pocket expenses.

The financial hardship and SME groups were recruited through a market research recruiter, Alta Research, who specialises in recruitment for such discussion groups. Phase 1 respondents were also invited back.

All SME participants were water and wastewater decision makers who had a role in interacting with Sydney Water either if there was a water interruption or wastewater

overflow or by paying water bills. Small and medium businesses were defined as those with 0-199 employees that did not operate out of home but had a designated premises. As with the forum recruitment, those with personal or professional connections to Sydney Water were screened out. It was ensured that a good mix of businesses in terms of industry were included.

For the financial hardship groups, the definition was that they held a concession/low income healthcare card and had difficulty paying utility bills in the last 12 months (i.e. requested an extension). Again, those who had a personal or professional connection with Sydney Water were screened out, i.e. if they or any immediate members of their family, worked for Sydney Water, any other water or wastewater utility company, for IPART or in a water quality related role with NSW Health or NSW Environment Protection Authority. There were a mix of genders and ages included and over half in each group were owners of their properties (either outright or with a mortgage).

Online survey

The fieldwork was conducted between 16 November and 3 December 2018. All respondents were sampled through the Pureprofile online panel and were compensated for their time through Pureprofile's rewards system, which offers cash, e-gift cards and movie tickets.

Businesses were identified by asking respondents whether they were a business owner or sole trader with a commercial premises or responsible for managing business operations at a commercial premises.

Citizens were screened out if they or anyone else in their household works in water supply and wastewater services, market research, for IPART, for NSW Health in a role related to water quality regulation or for the NSW Environment Protection Authority. Similarly, businesses were screened out if they operate in the water and wastewater service or market research industries.

Respondents were also screened out if they indicated that they do not pay Sydney Water bills or any amount for water and wastewater separate from rent. These respondents are not in a position to make the price-service trade-offs examined in the survey, since prices do not directly affect them.

Soft quotas were set using Australian Bureau of Statistics data for the 15 SA4 regions covering Sydney Water's operating area for age, gender and location of citizens and for location of businesses. A hard quota was set for responses from areas in which Sydney Water delivers stormwater services and Pureprofile partnered with other online panels to meet this quota. The number of survey completions collected are set out in table 4.3.

4.3 Online survey sample size

	Non-stormwater areas	Stormwater areas	Total
Residential	956	205	1161
Business	220	23	243
Total	1176	228	1404

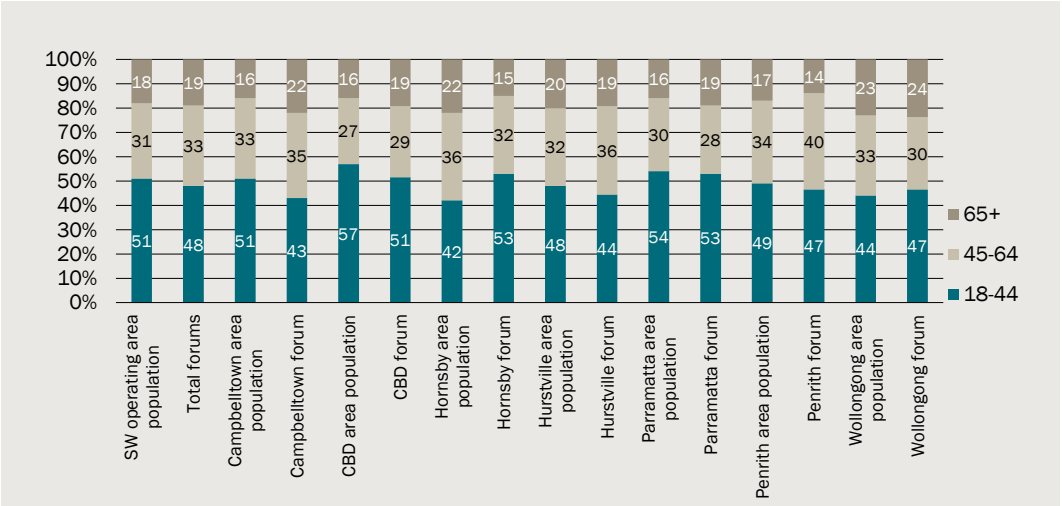
Source: CIE

Representative samples

Deliberative forums

The age of attendees at the forums is presented in Figure 4.4. At each location there was a good spread of ages represented which was close to the actual population proportions.

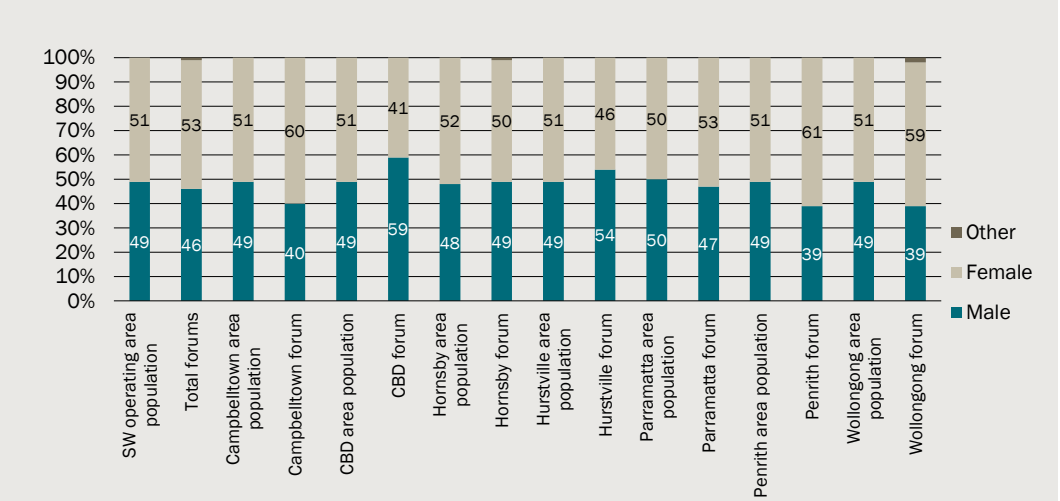
4.4 Age of forum participants and population by location



Base: Total forums (n=549); Campbelltown forum (n=83); CBD forum (n=68); Hornsby forum (n=88); Hurstville forum (n=72); Parramatta forum (n=75); Penrith forum (n=75); Wollongong forum (n=88), unweighted

There was some variation in gender representation across the various forums, for example at the CBD forum there was a higher proportion of males, compared to the Penrith forum where there was a higher proportion of females. Overall this fell out to be approximately representative of the total Sydney Water operating area (46 per cent male, compared to 49 per cent of the population).

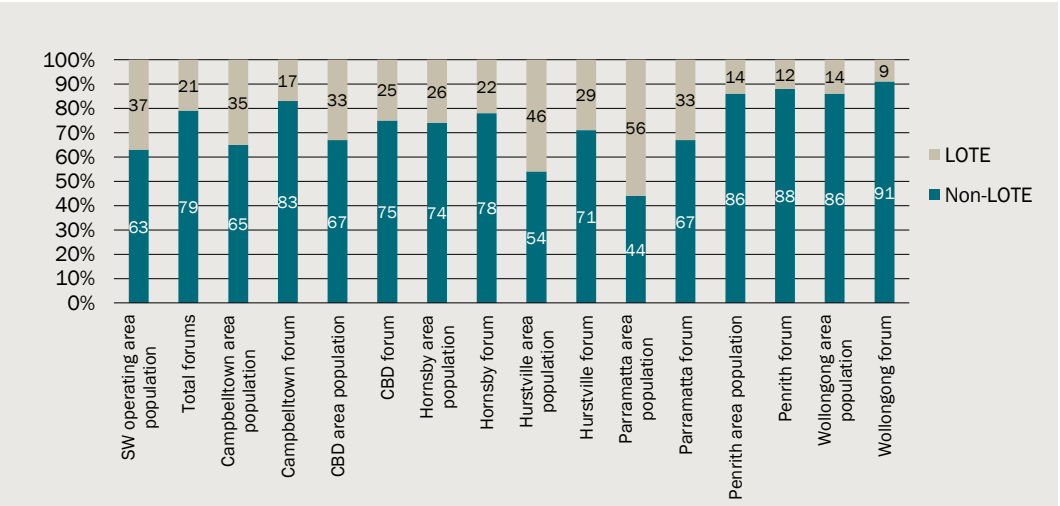
4.5 Gender of forum participants and population by location



Base: Total forums (n=549); Campbelltown forum (n=83); CBD forum (n=68); Hornsby forum (n=88); Hurstville forum (n=72); Parramatta forum (n=75); Penrith forum (n=75); Wollongong forum (n=88), unweighted

Consistent with Phases 1 and 2, the proportion of LOTE representation was somewhat lower than the population proportions for each area. This is to be expected since forums conducted in English are typically attended by those who speak English well. This was addressed through the inclusion of in-language groups, as well as weighting the forum keypad results by this variable during data analysis.

4.6 Incidence of LOTE amongst forum participants and population by location

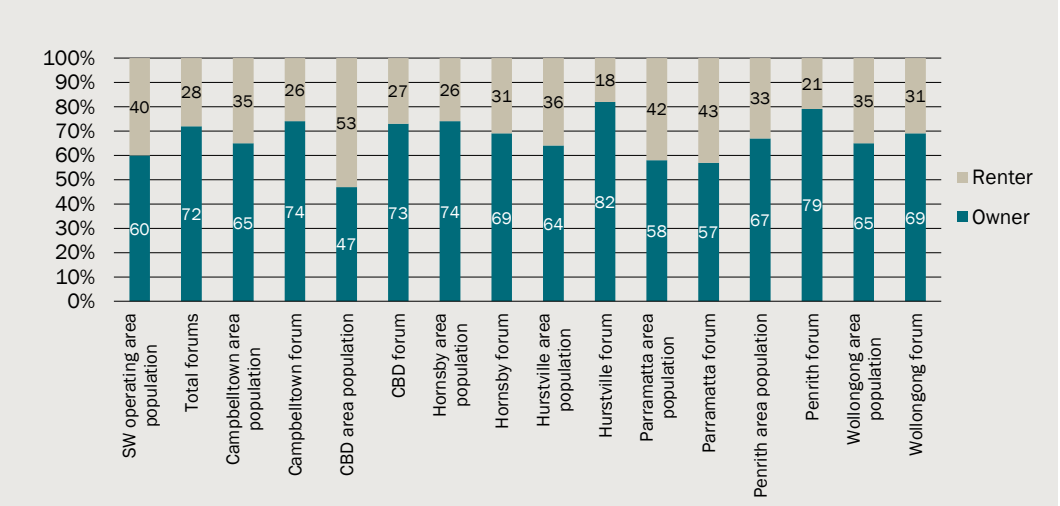


LOTE (Language other than English)
Base: Total forums (n=549); Campbelltown forum (n=83); CBD forum (n=68); Hornsby forum (n=88); Hurstville forum (n=72); Parramatta forum (n=75); Penrith forum (n=75); Wollongong forum (n=88), unweighted

Overall there was a higher proportion of home owners in attendance at the forums compared to the total operating area population (72 per cent home owners compared to 60 per cent population proportion). This was particularly the case for the CBD, Hurstville, Penrith and Campbelltown forums. Although this means that home owners are somewhat over represented, this group was particularly relevant for the forum

content as each decision had an impact on the water bill (which renters pay only partially or not at all).

4.7 Incidence of home ownership amongst forum participants and population by location



Base: Total forums (n=549); Campbelltown forum (n=83); CBD forum (n=68); Hornsby forum (n=88); Hurstville forum (n=72); Parramatta forum (n=75); Penrith forum (n=75); Wollongong forum (n=88), unweighted

The forum participants were also representative in terms of ATSI with 2 per cent of the sample being of Aboriginal and Torres Strait Islander origin (compared to 1.5 per cent in the Greater Sydney area).

For the Phase 3 forums an additional question was included in the recruitment screener on disability. Eight per cent of participants considered themselves to have some kind of disability.

In addition, the forum keypad data was weighted by the seven regions to ensure a representative sample across the Sydney Water area for the total results.

Online survey

A comparison of characteristics of the sample of citizens with those of the population is set out in table 4.8. It shows the sample accurately represents the characteristics of the underlying population, except for an oversampling of females.

4.8 Representativeness of sample of citizens

	Sample	Sample	Population
	n	per cent	per cent
Region			
Illawarra	77	7%	6%
Sydney - Baulkham Hills and Hawkesbury	49	4%	5%
Sydney - Blacktown	94	8%	7%

	Sample	Sample	Population
	n	per cent	per cent
Sydney - City and Inner South	92	8%	7%
Sydney - Eastern Suburbs	53	5%	6%
Sydney - Inner South West	147	13%	12%
Sydney - Inner West	82	7%	6%
Sydney - North Sydney and Hornsby	97	8%	9%
Sydney - Northern Beaches	45	4%	5%
Sydney - Outer South West	58	5%	5%
Sydney - Outer West and Blue Mountains	69	6%	6%
Sydney - Parramatta	123	11%	9%
Sydney - Ryde	55	5%	4%
Sydney - South West	68	6%	8%
Sydney - Sutherland	52	4%	5%
Gender			
Male	437	38%	50%
Female	719	62%	50%
Non-gender-specific	1	0%	
Prefer not to say	4	0%	
Age			
18-29 years	199	17%	24%
30-39 years	246	21%	20%
40-49 years	197	17%	17%
50-59 years	186	16%	15%
60-69 years	192	17%	12%
70-79 years	116	10%	7%
80 years or more	25	2%	5%

Source: CIE, ABS

Characteristics of the sample of businesses are compared to those of the full population of businesses in table 4.9. The population we wish to represent is not the full population of businesses, but rather the population of businesses that have a commercial premises. Data on the characteristics of this population are not readily available. Some of the differences between the sample and population characteristics in the table are likely to be due to the population characteristics not accurately reflecting the population we wish to represent. For example, the apparent under-sampling of sole traders is likely to reflect at least in part that many sole traders do to have a commercial premises.

4.9 Characteristics of business sample and population

	Sample	Sample	Population
	n	per cent	per cent
Region			
Illawarra	10	4%	4%
Sydney - Baulkham Hills and Hawkesbury	6	2%	6%
Sydney - Blacktown	17	7%	4%
Sydney - City and Inner South	38	16%	15%
Sydney - Eastern Suburbs	6	2%	7%
Sydney - Inner South West	26	11%	11%
Sydney - Inner West	24	10%	7%
Sydney - North Sydney and Hornsby	42	17%	11%
Sydney - Northern Beaches	11	5%	6%
Sydney - Outer South West	8	3%	3%
Sydney - Outer West and Blue Mountains	5	2%	4%
Sydney - Parramatta	25	10%	9%
Sydney - Ryde	9	4%	4%
Sydney - South West	9	4%	6%
Sydney - Sutherland	7	3%	4%
Employment size			
Non-employing / sole trader	33	14%	59%
1-4 employees	46	19%	30%
5-19 employees	115	47%	8%
20-199 employees	49	20%	2%
Industry			
Accommodation and Food Services	27	11%	4%
Administrative and Support Services	9	4%	4%
Agriculture, Forestry and Fishing	6	2%	1%
Arts and Recreation Services	9	4%	1%
Construction	10	4%	15%
Education and Training	19	8%	2%
Electricity, Gas, Water and Waste Services	5	2%	0%
Financial and Insurance Services	8	3%	10%
Health Care and Social Assistance	13	5%	6%
Information Media and Telecommunications	7	3%	2%
Manufacturing	14	6%	3%
Other Services	17	7%	4%
Professional, Scientific and Technical Services	35	14%	15%
Public Administration and Safety	1	0%	0%
Rental, Hiring and Real Estate Services	7	3%	12%

	Sample	Sample	Population
	n	per cent	per cent
Retail Trade	40	16%	6%
Transport, Postal and Warehousing	5	2%	8%
Wholesale Trade	11	5%	4%

Source: CIE, ABS

Other selected characteristics of the citizen sample are set out in table 4.10.

4.10 Other selected characteristics of sample of citizens

	Sample	Sample
	n	per cent
Tenure type		
Owned outright or with a mortgage	841	72%
Being rented or occupied rent-free	307	26%
Other (please specify)	13	1%
Language Other Than English		
No, English only	911	78%
Yes	250	22%
Aboriginal or Torres Strait Islander		
Yes	19	2%
No	1134	98%
Prefer not to say	8	1%
Household income		
Less than $41,600	165	14%
Between $41,600 and $78,000	226	19%
Between $78,000 and $104,000	171	15%
Between $104,000 and $156,000	244	21%
More than $156,000	171	15%
Do not wish to answer	184	16%
Dwelling type		
Separate house	727	63%
Semi-detached, row or terrace house, townhouse	179	15%
Flat or apartment	253	22%
Other	2	0%

Source: CIE

5 Results

Reactions to tariff structure proposals

- **Roughly three in four participants either strongly or moderately support Sydney Water's proposed water and wastewater price structures.**

Deliberative forums

There was overall agreement that Sydney Water had taken the time to understand, assess and act on responses from Phase 2 of the research. Participants who had attended the second round of forums recalled the topics discussed and felt that they had been listened to and their responses considered.

Some of those participants recalled the extensive discussions they had had at their tables on the impact of balancing the fixed and variable charges in their water bill, and the preference of the room to opt for a higher variable charge for their water usage in order to encourage people to reduce consumption.

"$2.08 to $2.13 is not much of an increase. I guess we will see what impact it has on our bill when it starts." Penrith participant

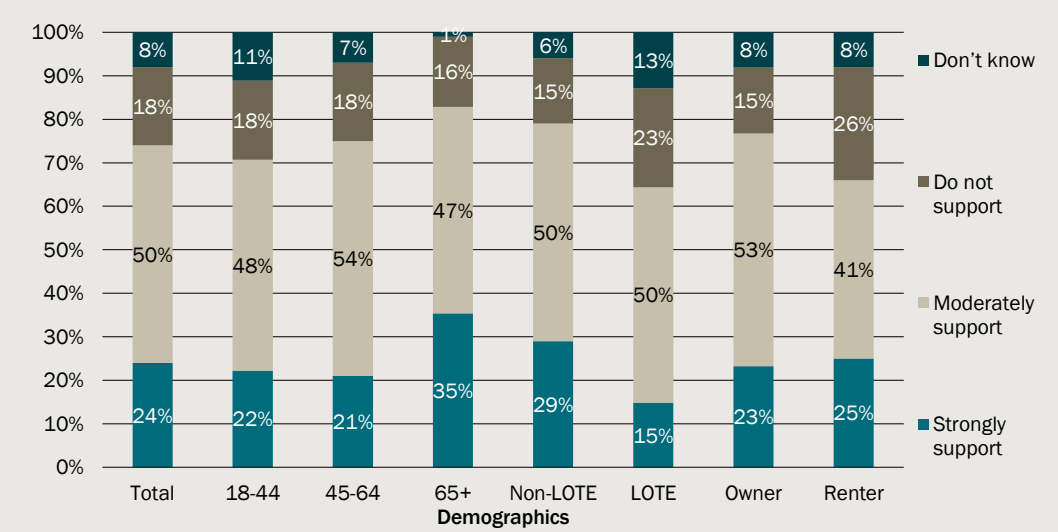
They were happy with the amount the usage charge had been increased by, feeling that this was acceptable and not too much of a jump from where it was currently.

"I was in the last forum and most of us were happy for Sydney Water to put up the usage charge." Campbelltown participant

This was reflected in the keypad voting with 74 per cent supporting (strongly + moderately) the proposed usage price increase. Figure 5.1 shows the differences between demographics in support of this proposed change. While the findings were consistent, those aged 65+ were significantly more likely to strongly agree with the proposed changes (35 per cent compared to 24 per cent overall).

Those who spoke a language other than English (LOTE) at home were significantly less likely to strongly support the proposed usage price increase (15 per cent compared to 24 per cent overall), however still showed support at the moderate level (50 per cent). Renters were also significantly more likely to not support the change (26 per cent compared to 18 per cent overall), as the increase in usage price would directly affect their water bills.

5.1 Support for water price structure proposal by demographic



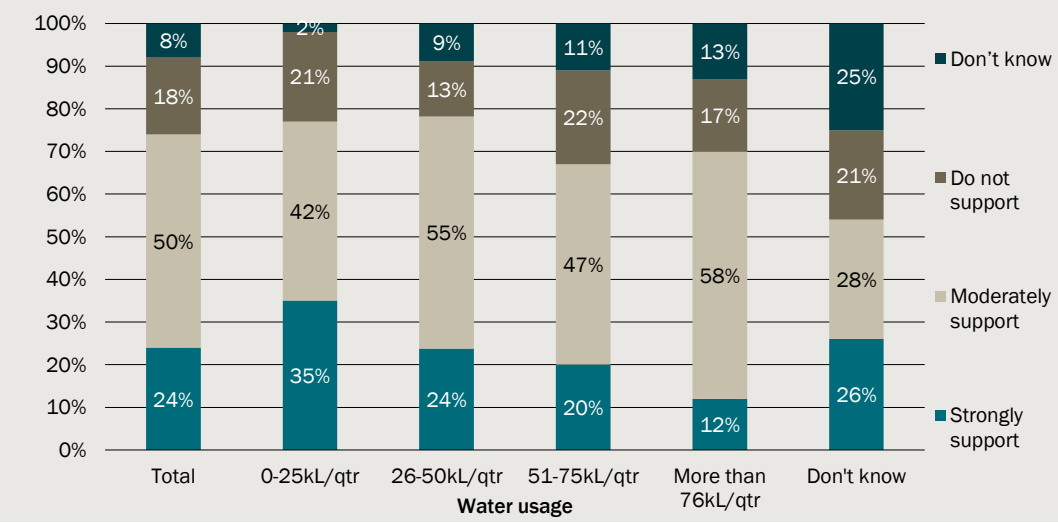
Overall, do you support Sydney Water's proposal for water prices, with a usage charge of $2.13 per kilolitre?

Base: All respondents n=549; 18-44 (n=263), 45-64 (n=178), 65+ (n=103), Non-LOTE (n=436), LOTE (n=113), Owner (n=390), Renter (n=150)

Data source: CIE/Woolcott

Looking at support for the increase in usage price across household quarterly consumption shows there was also strong support. Those with a quarterly water bill of 0-25kL were significantly more likely to strongly support the usage price increase proposal (35 per cent compared to 24 per cent overall), however those with quarterly water usage 76kL+ were significantly less likely to strongly support (12 per cent), yet still showed support overall (70 per cent).

5.2 Support for water price structure proposal by usage amount



Overall, do you support Sydney Water's proposal for water prices, with a usage charge of $2.13 per kilolitre?

Base: All respondents n=549; 0-25kL/qtr (n=113), 26-50kL/qtr (n=187), 51-75kL/qtr (n=103), 76+kL/qtr (n=65), Don't know (n=14)*

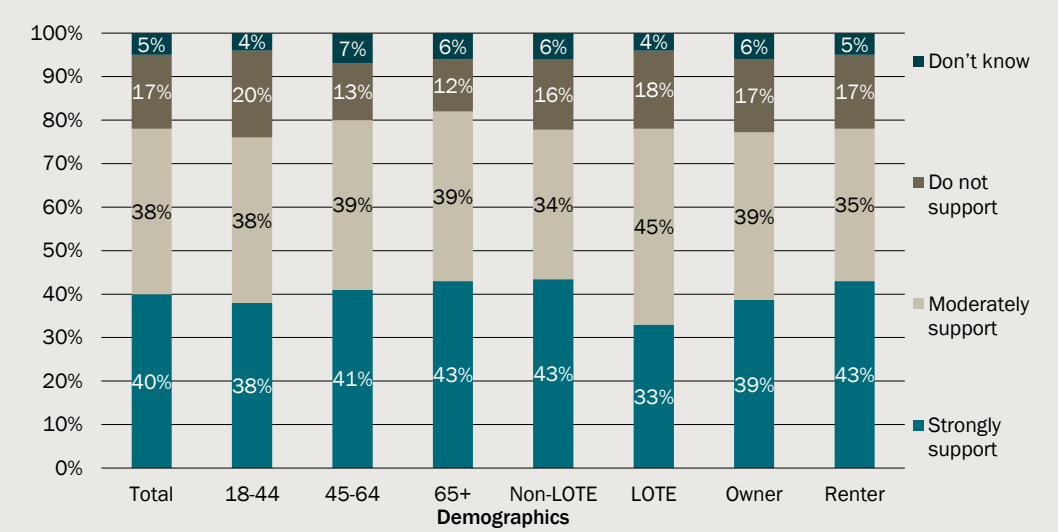
**WARNING: Small base size*

Data source: CIE/Woolcott

The decision to stay with only a fixed charge for wastewater was also supported by participants within the forums. Most agreed that introducing a usage charge would be difficult to do, hard to understand and confusing to a lot of people. Many noted that they had discussed this extensively in the second phase of forums and felt a set discharge factor was an unfair system to use across the board and were therefore happy that Sydney Water had considered their feedback and left the price as a fixed charge.

Figure 5.3 shows that 78 per cent of participants strongly or moderately supported keeping wastewater prices as fixed. This level of support was consistent across the demographics.

5.3 Support wastewater price structure proposal by demographic



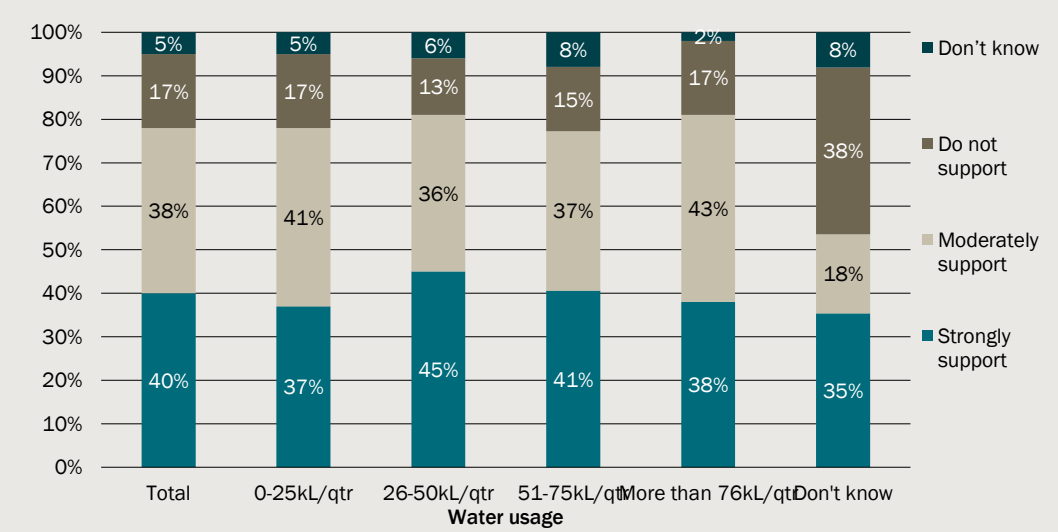
Overall, do you support Sydney Water's proposal for residential wastewater prices, to keep these as a fixed charge only?

Base: All respondents n=549; 18-44 (n=263), 45-64 (n=178), 65+ (n=103), Non-LOTE (n=436), LOTE (n=113), Owner (n=390), Renter (n=150)

Data source: CIE/Woolcott

There were no significant differences in levels of support for keeping wastewater prices fixed by level of water consumption (figure 5.4).

5.4 Support wastewater price structure proposal by usage amount



Overall, do you support Sydney Water's proposal for residential wastewater prices, to keep these as a fixed charge only?

Base: All respondents n=549; 0-25kL/qtr (n=113), 26-50kL/qtr (n=187), 51-75kL/qtr (n=103), 76+kL/qtr (n=65), Don't know (n=14)*

**WARNING: Small base size*

Data source: CIE/Woolcott

Discussion groups

Speakers of languages other than English

Overall, participants across all the LOTE groups supported Sydney Water's proposal for an increase in the water usage price to $2.13 per kilolitre for 2020. Participants who attended Phase 2 of the research confirmed that an increase aligned with what they remembered from this earlier phase. New participants were also in favour of the proposed increase in usage price.

Hindi and Cantonese speaking participants, however, believed that such a small increase – from the current $2.08 to the proposed $2.13 per kilolitre - may not have the desired impact of encouraging consumers to reduce their usage or water conservation. Participants thought that a significant increase in usage charge would be needed to incentivise people to be more conscious of water usage.

"There should be more of an increment, more than $2.13 for the usage charge. This would encourage people to reuse the water or have less time in the shower."
Cantonese speaking participant

There were mixed responses to the issue of wastewater charges within most of the groups, with some supporting Sydney Water's proposal to retain the same fixed charge for all residential customers from 2020 and others preferring the introduction of a usage charge.

For example, the majority of Hindi and Mandarin speaking participants, and some Cantonese and Vietnamese speaking participants, were not in favour of the current proposal of keeping a fixed charge per household for wastewater. There was a preference for usage-based charges to be introduced that are directly proportional to the amount of wastewater produced, although it was acknowledged that this is difficult to do currently.

Financially-vulnerable customers

Those in the financially vulnerable groups were supportive of the tariff structure proposals. They believed that increasing the usage charge may encourage more water saving behaviours, which were deemed to be important in this time of drought. The continuation of a fixed charge only for wastewater which is the same for houses and apartments was also thought to be logical, given that the volume of wastewater was thought to be relative to the number of people in the household rather than the dwelling type.

Small-medium businesses

The small to medium business customers supported the change to the usage charge from $2.08 to $2.13 as it was thought that this may mean they could save money by monitoring their usage further.

For wastewater pricing the small and medium business participants were presented with different information to the residential customers. A recap was provided that Sydney Water's wastewater prices for businesses currently have a fixed charge, based on the meter size and a discharge factor, and a wastewater usage charge, based on the water used and the discharge factor.

It was explained that most small businesses would not pay a usage charge, as they would not discharge above the allowable volume of 411 litres of wastewater a day (roughly the same as a house).

In the Phase 2 discussion groups, participants discussed four options for the wastewater usage charge, with most supporting increasing it. In the Phase 2 online survey, the majority of small to medium businesses had wanted to keep the current wastewater usage charge.

It was explained that Sydney Water has now done further analysis to better match wastewater pricing with the marginal costs of transporting and treating wastewater. As a result, Sydney Water put forward the proposal to reduce the usage charge from $1.16/kL to 60c/kL. It was outlined that Sydney Water believes that this will decrease wastewater bills overall for most businesses and is in line with other wastewater utilities.

Participants were supportive of this if it will decrease bills, as long as the service provided will be of a similar standard. Many were in fact surprised that the price was decreasing so much and felt that they couldn't have asked for a better outcome.

"Utility prices are always changing… I wouldn't object!"
Medium business owner

It was thought that a decrease in price would have no real business impact, and if it did then it would only be positive. As long as the quality of service was kept consistent, there were no objections to a price decrease for wastewater services.

Water interruptions

- **Option B – improve water continuity at an annual ongoing bill impact of $0.20 – was the preferred option in final choices made at both forums (86 per cent) and in the online survey (55 per cent compared to 33 per cent for the 'no change' option)**
- **This finding is consistent with the results of Phase 2 research and subsequent detailed cost-benefit analysis, which identified Option B as the preferred option**

Deliberative forums

Forum participants were presented with information regarding unplanned water interruptions. Sydney Water informed participants that each year around 20 in 1,000 properties experience a long interruption without notice, which represents about 2 per cent of Sydney Water customers.

Currently Sydney Water needs to make decisions about when to replace pipes after they experience repeat breaks in a short period of time and this balances the cost of replacement with the cost and inconvenience to customers of needing to turn off the water supply to do repairs.

Three alternative approaches were put to participants (including maintaining the status quo – Option A), along with their bill impact and participants were asked to choose their preferred option and discuss the reasons for their preference.

The first alternative (Option B) involved Sydney Water spending more money on buying and using new equipment that allowed them to fix breaks without turning off supply to people's homes and scheduling work to give more notice that their water supply may need to be turned off due to repairs. This option would reduce the number of properties affected by unplanned outages to 16 in every 1 000, however at a cost of an extra $0.20 each year.

Another alternative (Option C) which represented a bill saving of $1.50 involved Sydney Water letting pipes break more times before replacing them with completely new ones. Whilst this represented a saving, it would lead to more interruptions for customers because of more breaks, increasing the chance of experiencing an unplanned interruption to 24 in every 1 000 properties.

Participants were also informed that in the Phase 2 survey results on service performance, customers indicated a willingness to pay of $0.75 for the change customers would receive under Option B, and in comparison, customers said that they would need a larger bill saving of around $6 a year to accept a decrease in service as expressed in Option C.

Initial choice

Across the forums there was overwhelming support for Option B. Many thought that the cost would be much higher and were happily surprised at the small increase in the annual bill amount.

The additional $0.20 on the yearly bill was considered inconsequential and if it helped reduce the number of customers being affected by unplanned interruptions then this was a positive outcome.

> *"B, seems an obvious choice, 20 cents a year is nothing. You wouldn't even notice it." Hornsby forum participant*

While not everyone had experienced a water interruption, the idea of having an unplanned interruption for five or more hours was harrowing and many felt that $0.20 was a small price to pay for a decrease in the number of unplanned interruptions, as well as potentially receiving more notice.

Conversely, saving $1.50 a year did not seem to be significant enough to be concerned about, and furthermore it was felt to be unfair to increase the number of people being impacted by these interruptions for such a small savings. While there was minimal interest from some people who identified themselves as stringent, the overall long-term cost impact seemed to far outweigh the short term cost savings.

> *"Other parts of Sydney have worse infrastructure, to I don't think it's pragmatic to apply this to every area." Hurstville forum participant*

There were a small number of people (6 per cent) who indicated a preference for Option A – no change. These people generally stated their preference was due to their satisfaction with current practice and levels of interruptions. Some also noted that they lived in 'newer' suburbs, which consequently had 'newer' infrastructure, and felt that the cost of replacing older terracotta infrastructure in older suburbs should not be applied to them.

A small number of participants felt that whilst $0.20 was a small amount of money to pay, the increase in service standard from 20 in 1000 to 16 in 1000 was not a lot of people. Some questioned if the service standard could be increased to closer to 0 in 1000 if the cost per year was increased to a higher amount (e.g. $0.80 - $1.00).

Figure 5.5 shows the corresponding keypad voting undertaken by forum participants. Option B was overwhelmingly supported (91 per cent).

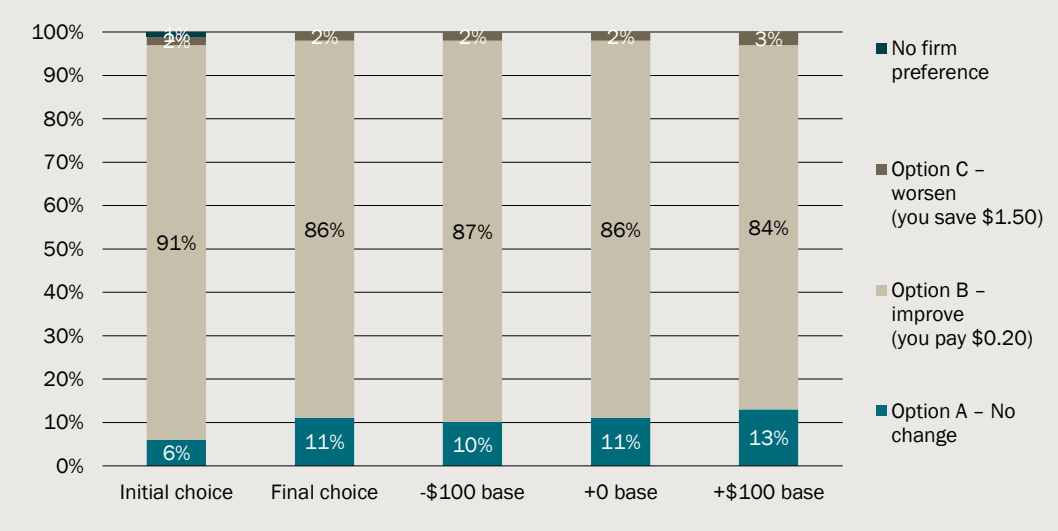
Final choice

After participants had been informed about all topics and made their choices, they were then able to add up their additional costs or savings and revise their choices in a more holistic sense. Once this had been completed, there was only a slight decrease in support for Option B (from 91 per cent down to 86 per cent; see figure 5.5).

Lower and higher bill scenarios

Participants were also explained the concept of bill fluctuation and were asked if they would alter their choices based on a potential overall price decrease of $100, as well as an increase of $100. As shown in figure 5.5, there was little change to preferences if the overall bill was to change by +/-$100, with most participants stating that it was such a small cost ($0.20) they were happy to pay this regardless.

5.5 Water interruption preferences with final choice and lower and higher bill scenarios



If your bill were to go down by $100 a year, which option would you choose for water interruptions? And If your bill were to go up by $100 a year, which option would you choose for water interruptions?

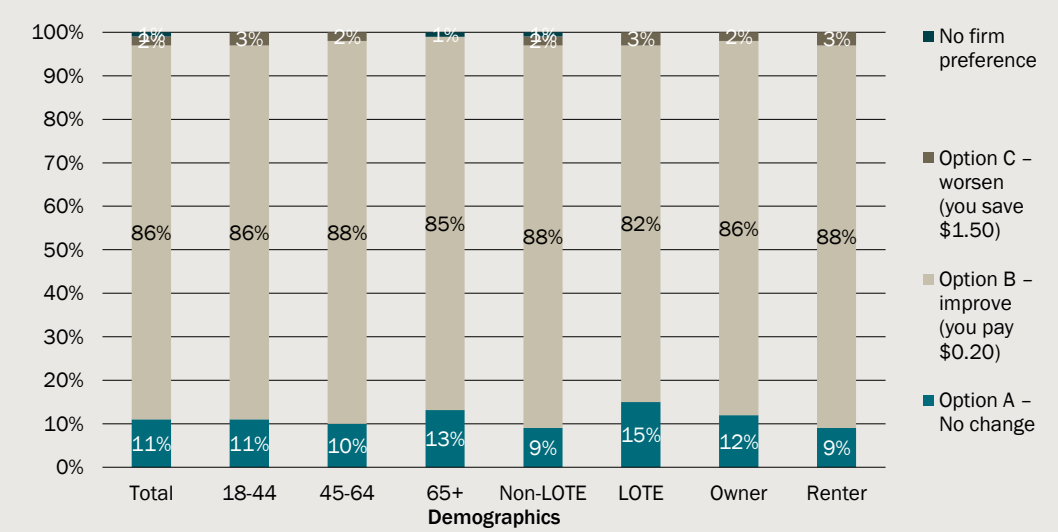
Base: All respondents n=549

Data source: CIE/Woolcott

Demographic differences

There were no differences by demographics for the preferred option for water interruptions. However, those in Campbelltown were slightly less likely to choose Option B as their final choice (74 per cent) than those in other locations.

5.6 Final water interruption preferences by demographics



For your final choice for water interruptions, which option did you choose?

Base: All respondents n=549; 18-44 (n=263), 45-64 (n=178), 65+ (n=103), Non-LOTE (n=436), LOTE (n=113), Owner (n=390), Renter (n=150)

Data source: CIE/Woolcott

Discussion groups

Overall, participants across the discussion groups also preferred Option B (75 per cent).

Speakers of languages other than English

The majority of participants in most language groups supported Option B (65 per cent). Those in favour of Option B felt that an increase of $0.20 per year was a small price to pay for improved services relating to water interruptions, i.e., new equipment and more notice.

"Anyone can see that B is the best option. It only costs you an extra 20 cents a year, but we will be better prepared for the future." Vietnamese speaking participant

"Current system is ok - minor interruptions are because of the new construction ongoing in the area which will ultimately get completed. So, this issue does not bother me much." Hindi speaking participant

The majority of Arabic speaking participants, and some participants from other groups, supported Option A for no change in water interruptions as they believed that the alternative options did not effectively improve outcomes. Participants also reported that they are not adversely affected by water interruptions, therefore, Sydney Water's current system is acceptable to them. Overall, participants believed that as very few people were affected by interruptions (less than 2 per cent of customers) this was not a major concern.

Few of the participants believed that Option C was viable, noting that worsening the current situation – that is, pipes being repaired more frequently before being replaced - was not worth the $1.50 savings per year and would contribute to an overall deterioration of the water system.

No one changed their preference when participants calculated the full bill impact or in the scenario of a lower base bill. One person switched from Option B to Option A in the scenario of a higher base bill (64 per cent chose Option B).

"Option C is not useful. They should replace the pipes when they need to be replaced. If Sydney Water keeps on repairing them and overly prolonging their 'life' then there could be even bigger problems later on." Cantonese speaking participant

Financially-vulnerable customers

Twelve of the fourteen financial vulnerable customers in the groups chose Option B. Water interruptions were viewed as a rare occurrence and it was thought to be important to ensure that the number of people affected is as few as possible. $0.20 was thought to be affordable and worth it for the better service.

This result did not change once participants had calculated the full bill impact, or if the bill were to increase or decrease by $100.

Small-medium businesses

All of the small and medium business participants in the groups chose Option B.

Water interruptions were seen to be particularly inconvenient for many businesses, so paying an extra $0.20 to improve reliability was felt to be well worth it. In fact, many of the business participants stated that they would be happy to pay more to obtain an even better level of service.

"I would want to pay more than this for more reliability." Small and medium business participant

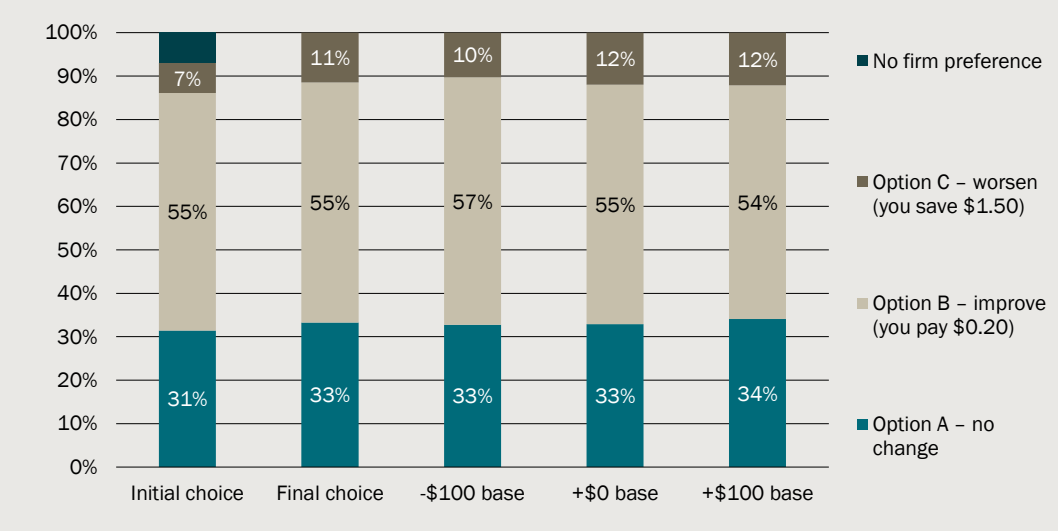
Results did not change once participants had calculated the full bill impact, or in the scenarios of if the bill were to increase or decrease by $100.

Online survey

The option preferred by survey respondents was Option B – to reduce the risk of unplanned water interruptions lasting longer than 5 hours to 16 in 1000 properties at a permanent annual bill impact of +$0.20. It received 55 per cent of the final choices, with the next highest option – the 'no change' option – receiving only 33 per cent. The 95 per cent confidence intervals on final choice are around ±2.5 percentage points. Since the vote for Option B was 22 percentage points higher than the next-most-popular option, we can conclude with a high level of confidence that Option B would be the preferred option if we surveyed Sydney Water's entire customer base.

Varying the base bill impact did not result in significantly different preferences, with the vote for Option B varying from 54 to 57 per cent. This variation is within the bounds of sampling uncertainty, with 95 per cent confidence intervals on each of the three subsamples being around ±4.5 percentage points.

5.7 Survey respondent preferences for water interruption options, by framing

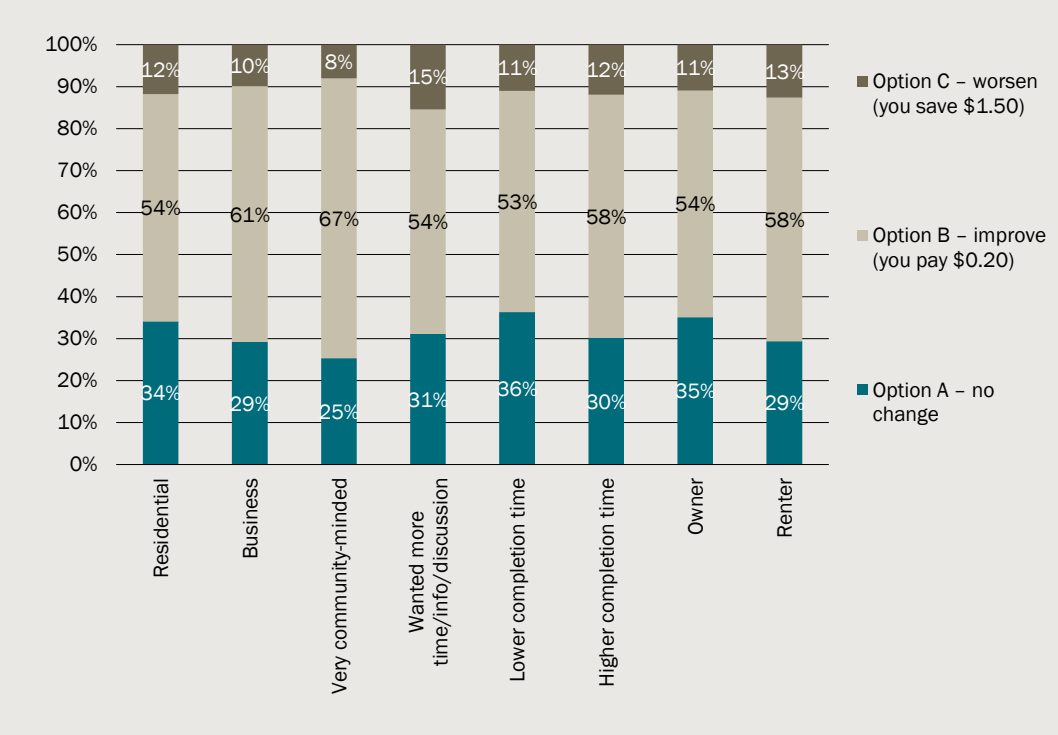


Initial choice n=1404, Final choice n=1404, -$100 base n=467, +$0 base n=468, +$100 base n=469

Data source: CIE

Option B was the preferred option for both households and businesses and for both property owners and renters. The stronger preference for Option B observed at the deliberative forums (86 per cent rather than 55 per cent) can be explained in part by the more community-minded thinking that tends to occur at forums, since a stronger preference for Option B (67 per cent) was observed among respondents who indicated they thought about the community a lot when making their choices.

5.8 Survey respondent preferences for water interruption options, by characteristics



Residential n=1161, Business n=243, Very community-minded n=573, Wanted more tine/info/discussion n=370, Lower completion time n=699, Higher completion time n=705, Owner n=961, Renter n=443

Data source: CIE

Water pressure

- **Option B – improve water pressure at an annual ongoing bill impact of $0.20 – was the preferred option in final choices made at both forums (70 per cent) and in the online survey (69 per cent)**
- **This finding is consistent with the results of the Phase 2 research, which found that households would be willing to pay $5 on average for Option B as a one-off payment. At a discount rate of 6 per cent, this payment translates to an ongoing bill impact of $0.30, which is higher than the cost of Option B**

Deliberative forums

The problem of water pressure failures was explained by Sydney Water, as an event where water pressure drops below the minimum standard. On average water pressure across the Sydney Water network is well above the minimum standard, and water pressure failures do not occur often or for very long. However, Sydney Water explained that there are around 130 properties in rural or low density areas that experience water pressure failures on a more regular basis, sometimes once a month up to almost daily. Remedying this problem for these customers was described as quite difficult and expensive however, forum participants were offered an option to improve the water pressure for these people who experienced repeat problems.

The options put to participants were to either (Option A) continue with the current plan which is to monitor pressure in the network and maintain compliance, or (Option B), improve water pressure for these customers by purchasing and installing pressure booster pumps at a cost of $0.20 to each customer per year.

Participants were also informed that in the Phase 2 survey, customers indicated that they were willing to pay around $0.30 each year to fix this issue.

Initial choice

Interestingly, whilst the impact to the bill was the same amount as the water interruption figure, not as many participants were willing to pay the extra $0.20. Many did a calculation and felt that this was a lot to spend on fixing a problem for only 130 customers. Whilst they empathised with those with the problem, quite a number of participants saw this a providing very poor value for money.

"Is it just 130 people? Like just 130 in 2 million? That's pretty expensive just for these people." Wollongong forum participant

"I don't think its value for money, but I'd still support it." Wollongong forum participant

"20c a year does add up over the years so I would pick A. 130 customers is not many – it is such a small number of people helped so it is not worth it." Parramatta forum participant

"It's reasonable that everyone should have consistent water pressure." Hornsby forum participant

The majority however, were more generous in their response and suggested that an extra $0.20 on their bill each year was so small that they wouldn't notice it so were happy to pay. The also imagined that the change to the lives of the 130 customers would be quite marked and that everyone should be entitled to the same level of service.

"If I was the one having the trouble I'd like everyone to pitch in for me." Parramatta forum participant

"I pay more than 20c a year to charity. So very happy to pay that." Hurstville forum participant

Figure 5.19 shows the corresponding keypad voting undertaken by forum participants. Option B, to improve water pressure for the 130 customers at a cost of $0.20 to all customers was supported by the majority of participants (66 per cent).

Final choice

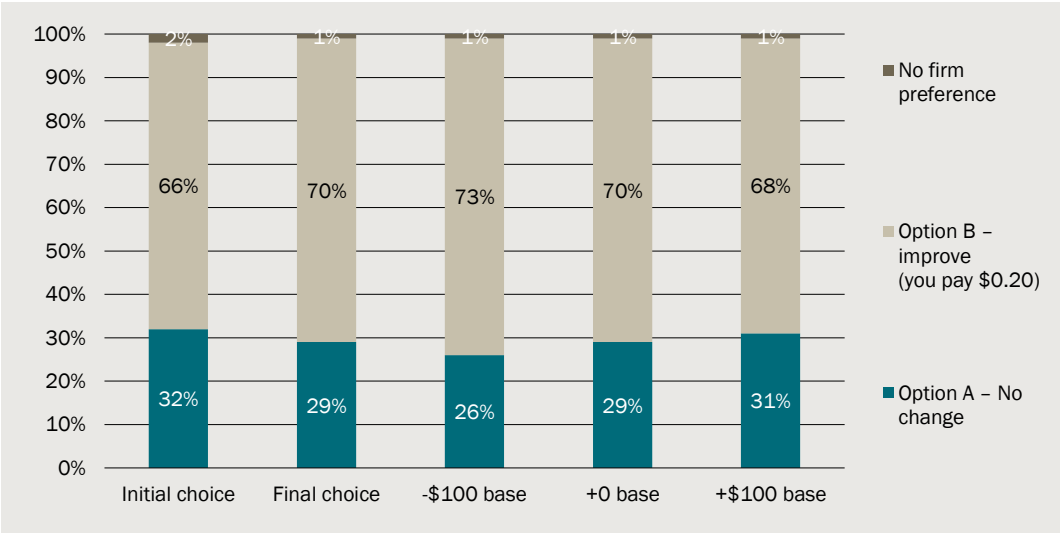
Similar to water interruptions, towards the end of the forum participants were asked to add up their choices for all of the topics to enable them to see their total bill impact. After doing so they were asked to re-visit their choices. The preferred option for water pressure

did not change and actually received slightly more support than it did initially (70 per cent).

Higher and lower bill scenarios

Participants were also asked to re-evaluate their choices under two hypothetical scenarios for if the base bill were to decrease by $100 or increase by $100. Again, the preferred option for water pressure remained the same with Option B receiving 73 per cent of the vote under the lower bill scenario and 68 per cent of the vote under the higher bill scenario.

5.9 Water pressure preferences with final choice and lower and higher bill scenarios



If your bill were to go down by $100 a year, which option would you choose for water pressure? and If your bill were to go up by $100 a year, which option would you choose for water pressure?

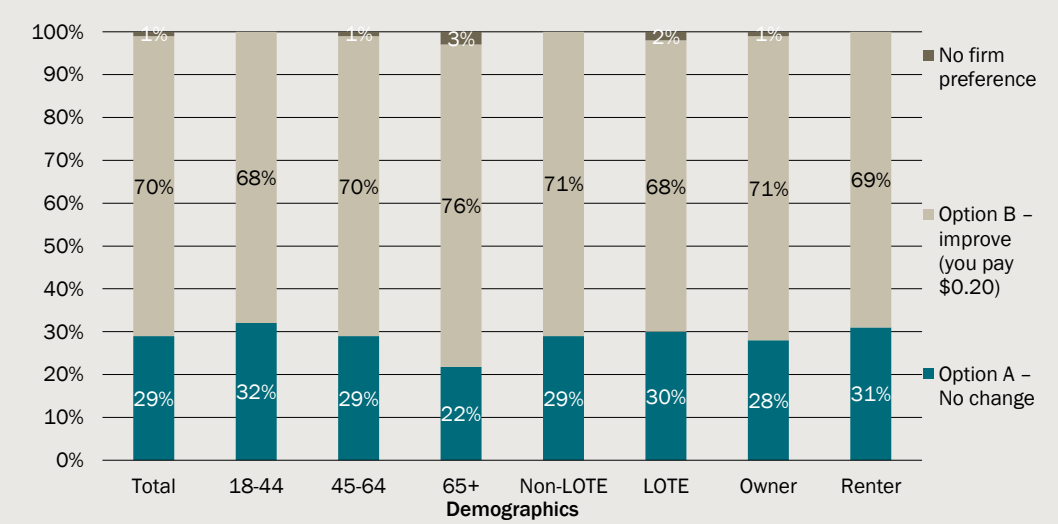
Base: All respondents n=549

Data source: CIE/Woolcott

Demographic differences

There were no differences in the preferred option by age, LOTE or owner/renter. However, those in Hornsby were more likely than others to choose Option B (80 per cent) and those in Wollongong were less likely to choose Option B (59 per cent). Higher water users were also less likely to choose Option B (53 per cent) than lower water users.

5.10 Water pressure preferences by demographics



For your final choice for water pressure, which option did you choose?

Base: All respondents n=549; 18-44 (n=263), 45-64 (n=178), 65+ (n=103), Non-LOTE (n=436), LOTE (n=113), Owner (n=390), Renter (n=150)

Data source: CIE/Woolcott

Discussion groups

Seventy per cent (70 per cent) of those in the discussion groups preferred Option B.

Speakers of languages other than English

The majority of the LOTE participants in the groups supported Option B (64 per cent) however there was a difference between the language speaking groups.

The majority of the Mandarin, Cantonese and Hindi speaking participants supported Option A – no change - with some believing that resources should be allocated to more important issues than water pressure. Some participants also believed that 130 households across Sydney Water's customer-base (who tend to be in rural or low-density areas) seemed like a small number of people affected by the issue, although it was acknowledged that repeated issues with water pressure would be problematic for those 130 households. Some participants believed that Option B would result in an increase in maintenance issues (due to the installation of pressure booster pumps) and therefore costs.

Most Vietnamese, Greek and Arabic speaking participants, on the other hand, supported Option B – fixing the problem in areas with repeat issues - believing that this was a cheap and affordable option to solve water pressure failures for everyone and would allow all customers to enjoy the same level of service.

Results did not change in the 'final' choices for water pressure (64 per cent). However, in the scenario of the bill decreasing by $100 a year the support for Option B increased in the LOTE groups to 71 per cent. If the bill increased by $100 a year support for Option B was at 67 per cent.

Financially-vulnerable customers

Nine of the 14 financially vulnerable participants in the groups preferred Option B and this increased to 10 in the final choices, reflecting a similar pattern to the forums. This support decreased slightly to 8 out of 14 in the bill increase scenario, with 6 choosing Option A.

Small-medium businesses

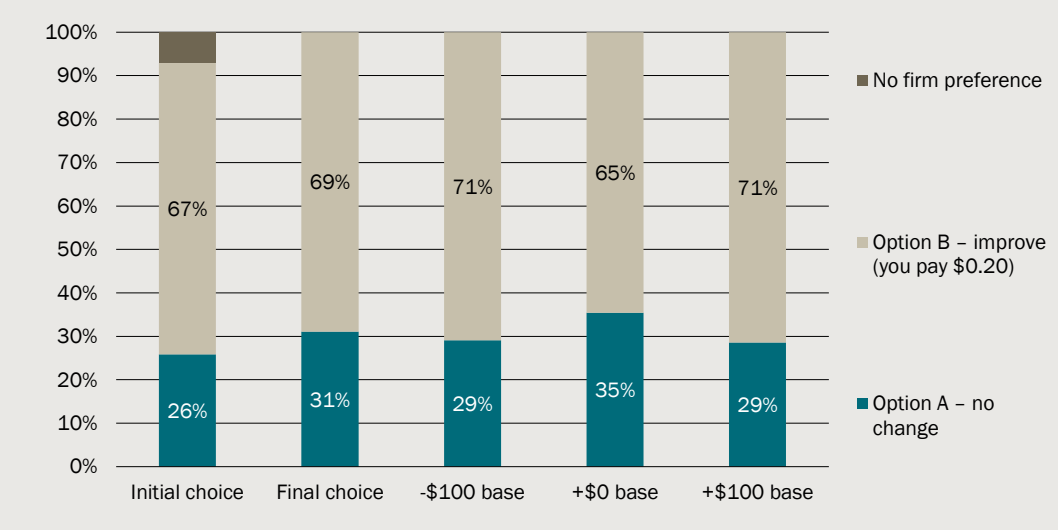
All of the small and medium business customers in the groups preferred Option B in their final choices. Even in the event of a bill increase of $100 a year, 14 of the 15 small and medium business participants preferred Option B for water pressure (a service improvement at a cost of $0.20 per customer). This was due to the importance of good water pressure to many types of businesses that rely on water for their core business.

Online survey

The option preferred by survey respondents was Option B – to improve water pressure for customers with ongoing low pressure at a permanent annual bill impact of +$0.20. It received 69 per cent of the final choices, with the 'no change' option receiving only 31 per cent. The 95 per cent confidence intervals on final choice are around ±2.5 percentage points. Since the lower bound of the confidence interval for Option B of 66.5 per cent is well above the 50 per cent plus one vote needed for a majority, we can conclude with confidence that Option B would be preferred by a majority if we surveyed Sydney Water's entire customer base.

Varying the base bill impact did not result in significantly different preferences, with the vote for Option B varying from 65 to 71 per cent. Contrary to expectations, the preference for Option B was higher when $100 was added to the base bill impact, however, the difference is similar to the bounds of sampling uncertainty, with 95 per cent confidence intervals on each of the three subsamples being around ±4.5 percentage points.

5.11 Survey respondent preferences for water pressure options, by framing

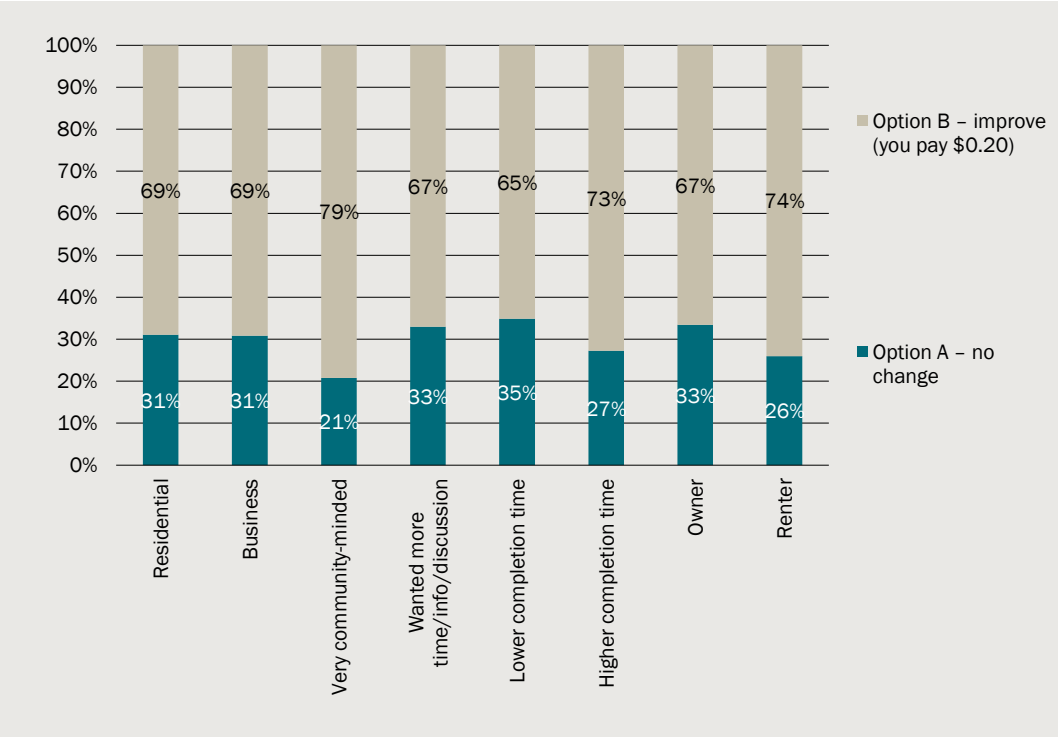


Initial choice n=1404, Final choice n=1404, -$100 base n=467, +$0 base n=468, +$100 base n=469

Data source: CIE

Option B was the preferred option for both households and businesses and for both property owners and renters. As expected, a stronger preference for Option B was found among respondents who indicated they thought about the community a lot when making their choices and respondents who spent more time completing the questionnaire.

5.12 Survey respondent preferences for water pressure options, by characteristics



Residential n=1161, Business n=243, Very community-minded n=573, Wanted more tine/info/discussion n=370, Lower completion time n=699, Higher completion time n=705, Owner n=961, Renter n=443

Data source: CIE

Wastewater overflows

- **Option A – no change – was the preferred option in final choices made at both forums (90 per cent) and in the online survey (76 per cent)**
- **This finding is consistent with the results of Phase 2 research and subsequent detailed cost-benefit analysis, which identified Option A as the preferred option.**

Deliberative forums

The next topic discussed within the forums was regarding wastewater overflows onto private properties. Sydney Water presented information on wastewater overflows caused by a blockage or a choke in Sydney Water's system, not from a blockage in a customer's private pipes. They reported that on average the chance of this occurring is around 5 in 1000 properties, which is less than one per cent of customers.

Three options were presented to participants. Option A was for Sydney Water to continue what they are doing which involves inspecting pipes in problem areas and replacing pipes to avoid repeat problems. This would result in no change to the bill.

Option B, was to increase the amount of proactive camera inspections of pipes to try and find blockages before they occur. This was described as an expensive option given the size of the Sydney Water network, however this would increase inspection rates so that the whole system was inspected every 10 years and reduce the number of customers affected to 3 in 1000 properties. The impact to the bill was presented as adding an extra $65 a year for this option.

A third option (Option C) was presented however subsequently discounted on the basis that this would cost each customer more money at the same time as worsening the level of service provided. This option was to spend less time inspecting wastewater pipes, however this would result in more overflows and more time responding to cleaning them up.

"I think we should stay with what we have got. The cost is too high for the extra people. It is only a difference of 2 in 1000." Parramatta forum participant

Sydney Water explained that in the Phase 2 surveys customers were willing to pay up to $2 a year for the change in service under option B, which is much less than the cost to do this.

Initial choice

Reactions to the wastewater options were less than positive, with the majority of participants (92 per cent) claiming that they would be unhappy paying an extra $65 a year to lower the chance of five customers in a 1000

"I would want the whole problem fixed – I would want 0 in 1000 for 65 dollars extra." Parramatta forum participant

experiencing a wastewater overflow to three. For most, this rate of improvement was not seen to be large enough to justify the cost impact.

"I'm better off waiting for the rebate of $70 than paying an extra $65." Penrith forum participant

Some were familiar with the rebate system and suggested that they would prefer risking a wastewater overflow on their property and saving the $65 a year, and furthermore if they were to be unlucky they would receive a rebate from Sydney Water anyway.

"65 is a lot more money for me as a pensioner, we had one of these instances recently and they fixed it and I got a rebate straight away." Hornsby forum participant

Others, more often those who had experienced a wastewater overflow, were more in favour of Option B and suggested that it is worth the extra $65 to avoid this event happening again.

"We were one of those 5 last week and so I would support option B." Wollongong forum participant

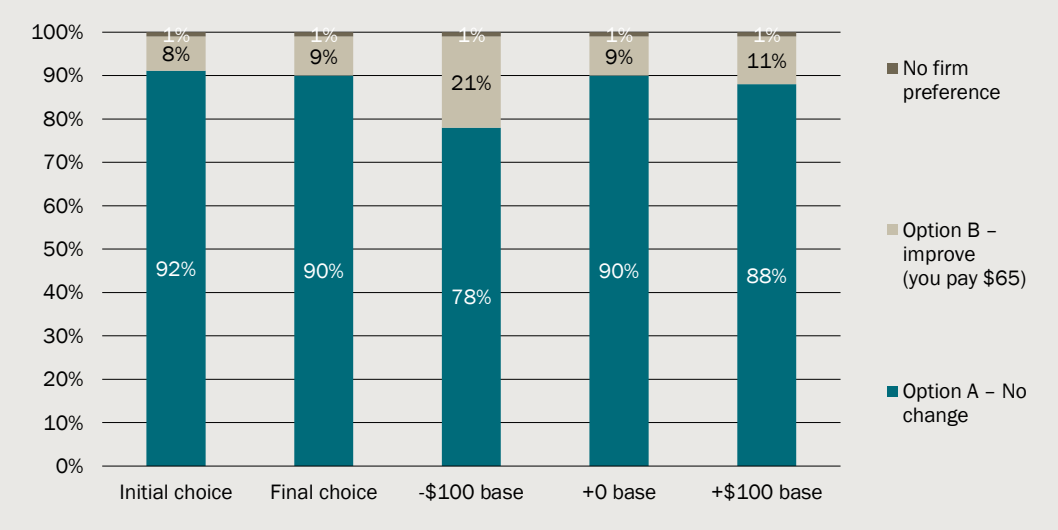
Final choice

After participants had made their choices for all the topics, they were then able to add them up and evaluate them in the light of the total bill impact. Once this had been completed, there was only a slight decrease in support for Option B (from 92 per cent down to 90 per cent; see figure 5.13). This shows that a small number of participants changed their preference to Option B ($65 per annum for a service improvement) when they calculated their total bill impact as they believed they could afford this option.

Lower and higher bill scenarios

Participants were then asked if they would alter their choices based on a potential overall price decrease of $100, as well as an increase of $100. As shown in figure 5.13, there was some change in preference if the overall bill was to decrease by $100, with 21 per cent then choosing Option B ($65 per annum for a service improvement), however the vast majority still chose Option A (78 per cent). There was little change for the scenario of the bill increase of $100.

5.13 Wastewater overflow preferences with final choice and pricing changes



If your bill were to go down by $100 a year, which option would you choose for wastewater overflows? and If your bill were to go up by $100 a year, which option would you choose for wastewater overflows?

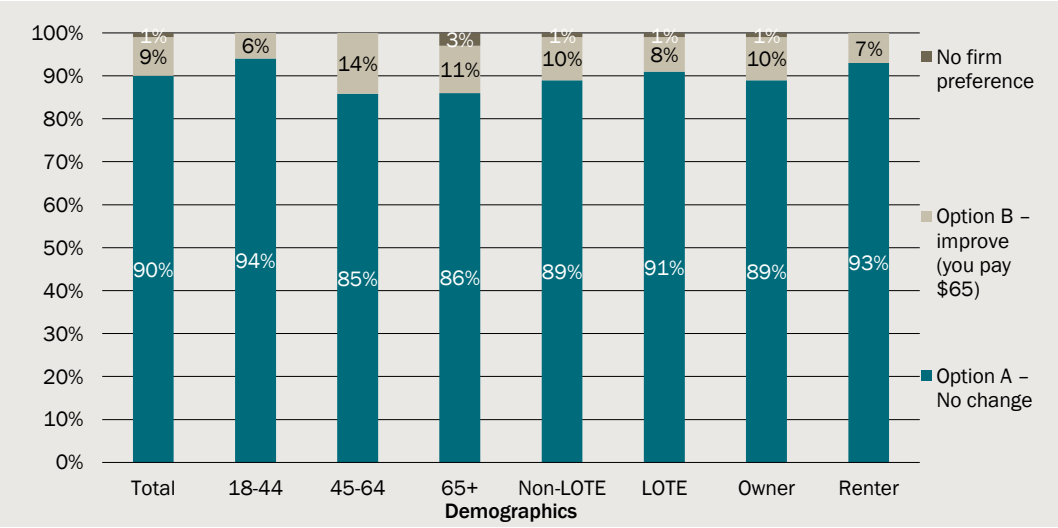
Base: All respondents n=549

Data source: CIE/Woolcott

Demographic differences

There were very few demographic differences in the final choice for wastewater overflows, the only one being that 45-64 year olds were more likely to choose Option B than the other age groups (14 per cent). There were no locational differences.

5.14 Final wastewater overflow preferences by demographic



For your final choice for wastewater overflows, which option did you choose?

Base: All respondents n=549; 18-44 (n=263), 45-64 (n=178), 65+ (n=103), Non-LOTE (n=436), LOTE (n=113), Owner (n=390), Renter (n=150)

Data source: CIE/Woolcott

Discussion groups

The vast majority of participants across the discussion groups preferred Option A (96 per cent).

Speakers of languages other than English

Most participants across all LOTE groups supported Option A for no change for wastewater overflows (98 per cent) in the initial and final choices. Overall, participants felt that Option B was a very expensive option - with an increase of $65 per year per household bill – for no significant change to the numbers affected or improved outcome for most customers.

"Our mentality is now thinking in 'cents' and then if we see this option - increase in dollars - and that is not going to lead to a significant change, then no." Hindi speaking participant

"Taking $65 from every house and to fix less than 50% of the problem areas is not acceptable. If it can be eliminated altogether, then we might consider it, but, if this is the case, I won't agree." Vietnamese speaking participant

In the scenario of a bill decrease of $100 support for Option A decreased very slightly to 93%, with 7% choosing to pay the $65 for an improvement. If the bill were to increase then support for Option A increased again to 95%.

Financially-vulnerable customers

Thirteen out of the 14 financially vulnerable customers preferred Option A in their final choice. In the scenario of a bill decrease by $100 this number did not change significantly, with 12 supporting Option A. With a hypothetical bill increase of $100 this reverted back to 13 of the 14 supporting Option A.

Small-medium businesses

Fourteen out of the 15 small and medium business customers supported Option A. This remained constant for their final choice and in the hypothetical bill scenarios of plus or minus $100. Reasons for choosing Option A were similar as at the forums and other discussion groups.

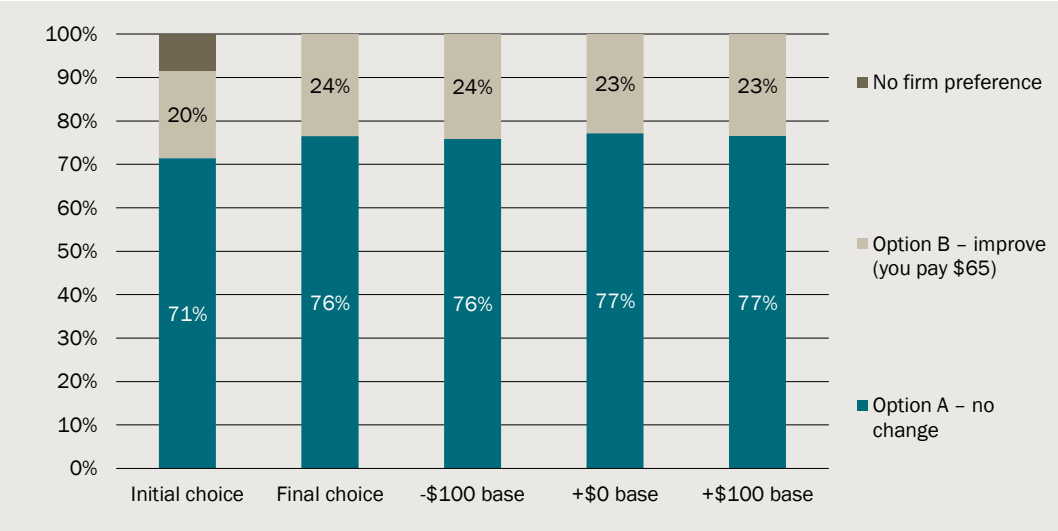
Online survey

The option preferred by survey respondents was Option A – no change. It received 76 per cent of the final choices, with the 'improve' option receiving only 24 per cent. The 95 per cent confidence intervals on final choice are around ±2.5 percentage points. Since the lower bound of the confidence interval for Option A of 74.3 per cent is well above the 50 per cent plus one vote needed for a majority, we can conclude with confidence that

Option A would be preferred by a majority if we surveyed Sydney Water's entire customer base.

Varying the base bill impact did not result in significantly different preferences, with the vote for Option A varying from 76 to 77 per cent. This variation is well within the bounds of sampling uncertainty, with 95 per cent confidence intervals on each of the three subsamples being around ±4.5 percentage points.

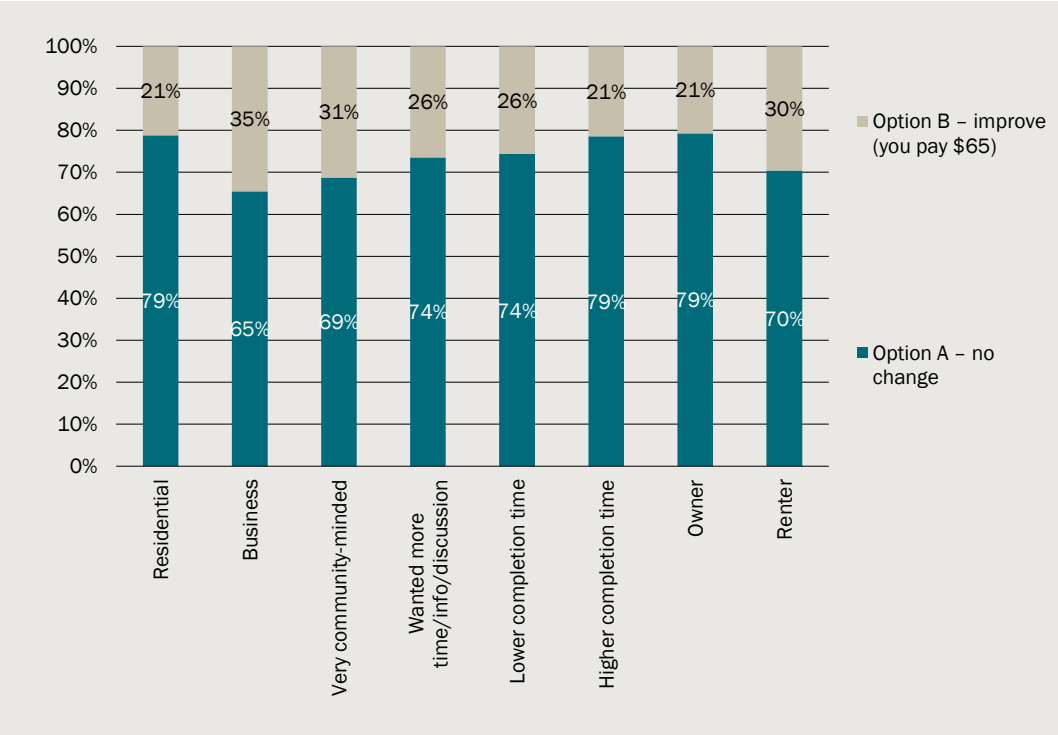
5.15 Survey respondent preferences for wastewater overflow options, by framing



Initial choice n=1404, Final choice n=1404, -$100 base n=467, +$0 base n=468, +$100 base n=469
Data source: CIE

Option A was the preferred option for both households and businesses and for both property owners and renters. Support for Option A was lower among businesses than households, with around one third of businesses preferring the improve option.

5.16 Survey respondent preferences for wastewater overflow options, by characteristics



Residential n=1161, Business n=243, Very community-minded n=573, Wanted more tine/info/discussion n=370, Lower completion time n=699, Higher completion time n=705, Owner n=961, Renter n=443

Data source: CIE

Untreated wastewater ocean outfalls

- **Option B – limit release of untreated wastewater at Sydney cliff faces at an annual ongoing bill impact of +$2.30 – was the preferred option in final choices made at both forums (87 per cent) and in the online survey (65 per cent)**
- **This finding contrasts with the results of Phase 2, which found that households would be willing to pay up to $18 as a one-off payment for Option B. This amount can be higher than the cost of Option B only if households assume a relatively high discount rate of at least 13 per cent per year.**

Deliberative forums

The next topic presented at the forums was the issue of untreated wastewater ocean outfalls. It was explained to participants that most of Sydney's wastewater is treated and released via deep ocean outfalls, about three to four kilometres out to sea. However, there are three ocean outfalls that were built between 1916 and 1936, that release untreated wastewater at the base of cliff faces. The amount released is the equivalent of four Olympic swimming pools' of untreated wastewater and two to three wheelie bins' worth of plastics and hygiene products into the ocean.

Participants heard that although this is the only wastewater system in NSW that still puts untreated wastewater into the ocean, it is allowed under Sydney Water's environmental licence.

It is believed that about 2 000 people use the areas for recreation activities like spear fishing, or take part in paddle and swim events that put them in direct contact with pollutants. A recent study was presented that shows localised impacts to human health and the marine environment in these areas but that nearby beaches continue to have good water quality results.

Two options were presented to participants. Option A would mean that Sydney Water continues to release untreated wastewater at Sydney cliff faces at no cost to the customer base. Option B would involve Sydney Water building new infrastructure to divert untreated wastewater to a treatment plant, to bring the system up to the same standard as the rest of Sydney, at a cost of $2.30 to each customer.

Sydney Water explained that in the Phase 2 surveys customers were willing to pay up to $1 a year to fix the legacy issue. However, the customers who did this survey did not know the actual cost. Sydney Water wanted to confirm whether customers would be willing to pay $2.30 per year to fund this new infrastructure.

Initial choice

There was strong support for this issue being rectified so that untreated wastewater is no longer discharged into the ocean (84 per cent). Many were surprised that this problem still exists, as they thought that it would have been rectified by now.

> *"Tourism depends on us being a clean country. If we can say that we don't pollute our oceans from these outfalls then that's great for us." Hornsby participant*

Many compared the $2.30 for Option B to the price of a coffee, and believed that this cost was well worth paying a year to ensure that Sydney's oceans are clean. There were concerns about the potential impact on tourism of having untreated wastewater pumped into the oceans.

> *"To be honest I am kind of appalled that this is still happening… 2-3 wheelie bins is disgusting… the harbour is full of plastic." CBD participant*

For many participants, although the thought of untreated sewage being discharged into the ocean was abhorrent it was the mention of the amount of plastics and hygiene products discharged into the ocean that they found most concerning, and the potential effect of this on marine life.

Although supportive, some participants were concerned that the cost of the infrastructure required could actually be higher than expected, and that customers may end up having to pay more down the track.

A minority suggested that those in the areas affected should pay for it, particularly when informed about which locations this occurs in as they are wealthy suburbs.

Some of those who chose Option A, no change to the current system, did so because of the fact that in wet weather there would still be untreated wastewater outfalls occurring, so the extra payment of $2.30 was not eliminating the problem entirely. Some suggested that they would pay more to ensure that this problem did not occur in wet weather either.

Others who voted for Option A believed that Sydney Water, or the government, should pay the cost of rectifying this issue, rather than customers doing so.

"It's just another revenue raiser for the government – they should be able to cover this expenditure without increasing bills."
Wollongong participant

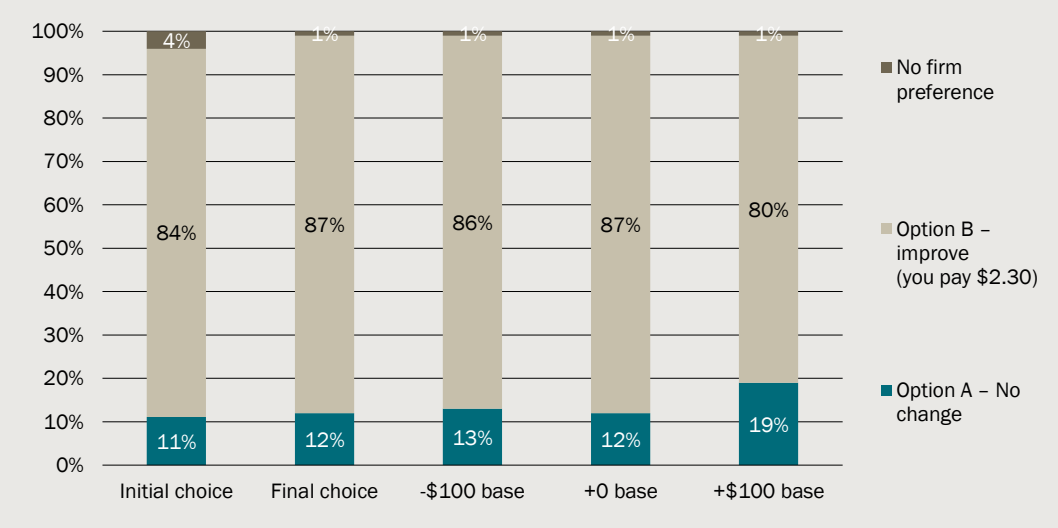
Final choice

Following the discussion and selection of options for all the topics, participants calculated their total bill impact and re-visited their choices. There was only a slight change in preference for this topic with 87 per cent then choosing Option B at a cost of $2.30, compared with 84 per cent choosing Option B for the initial choice.

Lower and higher bill scenarios

Participants were then asked if they would alter their choices based on a potential overall price decrease of $100, as well as an increase of $100. As shown in figure 5.17, in the bill increase scenario the proportion choosing Option B decreased to 80 per cent, with 19 per cent choosing Option A, so still the vast majority choosing Option B.

5.17 Untreated wastewater ocean outfall preferences with final choice and pricing changes



If your bill were to go down by $100 a year, which option would you choose for untreated wastewater ocean outfalls? and If your bill were to go up by $100 a year, which option would you choose for untreated wastewater ocean outfalls?

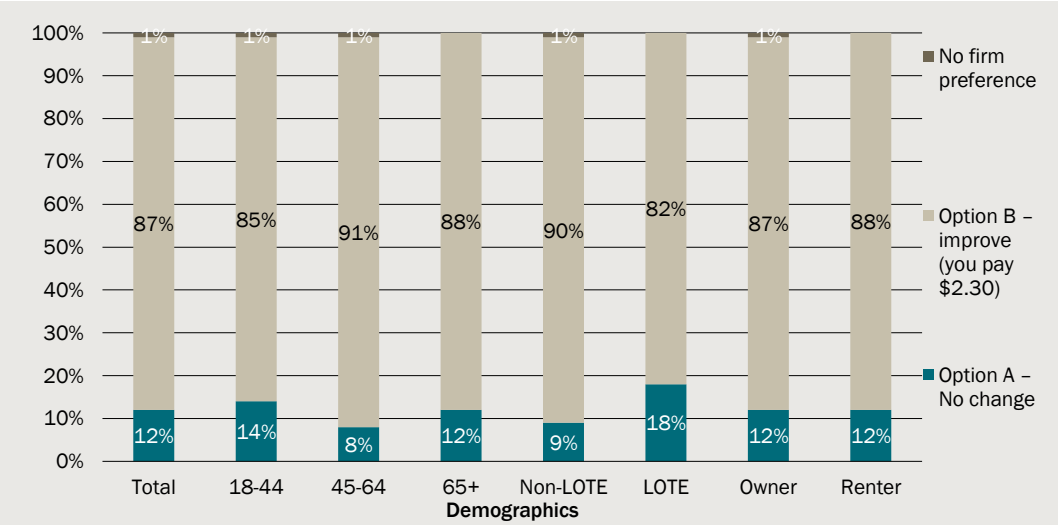
Base: All respondents n=549

Data source: CIE/Woolcott

Demographic differences

There were no demographic differences in results but there were some locational differences. Hornsby participants were less likely to choose Option A (1 per cent), Wollongong participants were more likely to choose Option B (95 per cent) and Parramatta participants were more likely to choose Option A (22 per cent) than in other forum locations.

5.18 Final untreated wastewater ocean outfalls preferences by demographics



For your final choice for untreated wastewater ocean outfalls, which option did you choose?

Base: All respondents n=549; 18-44 (n=263), 45-64 (n=178), 65+ (n=103), Non-LOTE (n=436), LOTE (n=113), Owner (n=390), Renter (n=150)

Data source: CIE/Woolcott

Discussion groups

Almost all the participants in the discussion groups chose Option B – to stop the discharge of untreated wastewater into the ocean at a cost of $2.30 per year (96 per cent).

Speakers of languages other than English

With the exception of one or two, all participants across the LOTE groups supported Option B to stop the practice of untreated wastewater ocean outfalls in the initial and final choice (91 per cent). Participants felt that the current situation was not acceptable and that the existing sewerage infrastructure is very old and needs replacing. The short- and longer-term impact on the environment, impact on marine life, and the impact on humans were raised as concerns by participants across the groups should Sydney Water continue doing what they are doing (Option A).

"About 20 cents a month to ensure health and safety for us when we go fishing and swimming is a cost worth paying for." Vietnamese speaking participant

"Option B - $2.30 is worth it to clean our oceans … because it is better for us and better for our children." Greek speaking participant

Support for Option B increased to 95 per cent in the event of a decrease in bills by $100 and remained stable in the event of a bill increase of $100.

"It would be hard for those live nearby the untreated outfalls. There would be a lot of bacteria around and the smell would be terrible." Cantonese speaking participant

Financially-vulnerable customers

All of the financially vulnerable customers preferred Option B – for Sydney Water to treat the wastewater before releasing to the ocean at a cost of $2.30 to all customers. In the event of a bill increase of $100, only one participant changed their preference to Option A with the remaining 13 still selecting Option B.

Small-medium businesses

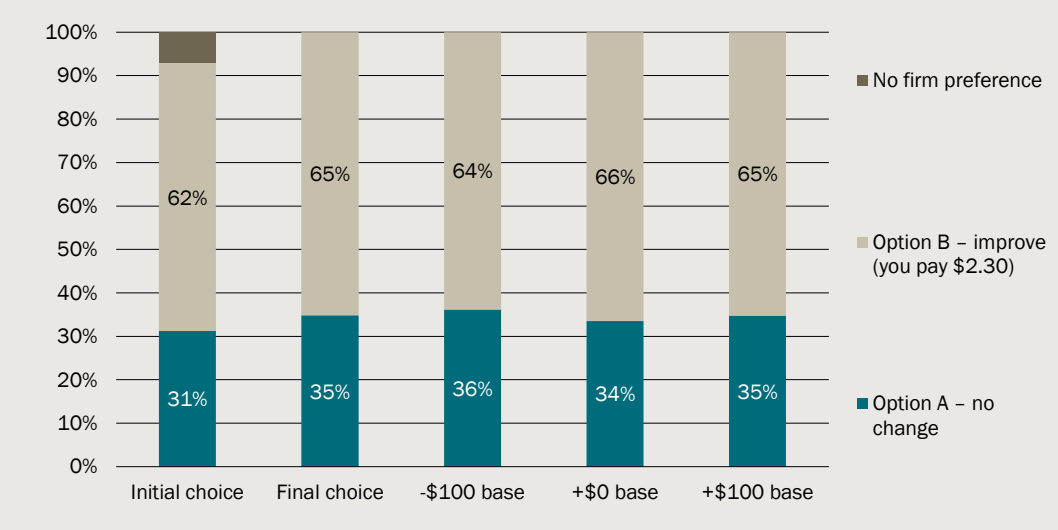
All of the small and medium business customers preferred Option B. In the event of a bill increase of $100, one small and medium business participant changed their preference to Option A with the remaining 14 still selecting Option B.

Online survey

The option preferred by survey respondents was Option B – limit release of untreated wastewater from Sydney cliff faces at a permanent annual bill impact of $2.30. It received 65 per cent of the final choices, with the 'no change' option receiving only 35 per cent. The 95 per cent confidence intervals on final choice are around ±2.5 percentage points. Since the lower bound of the confidence interval for Option B of 62.7 per cent is well above the 50 per cent plus one vote needed for a majority, we can conclude with confidence that Option B would be preferred by a majority if we surveyed Sydney Water's entire customer base.

Varying the base bill impact did not result in significantly different preferences, with the vote for Option A varying from 64 to 66 per cent. This variation is well within the bounds of sampling uncertainty, with 95 per cent confidence intervals on each of the three subsamples being around ±4.5 percentage points.

5.19 Survey respondent preferences for ocean outfalls options, by framing

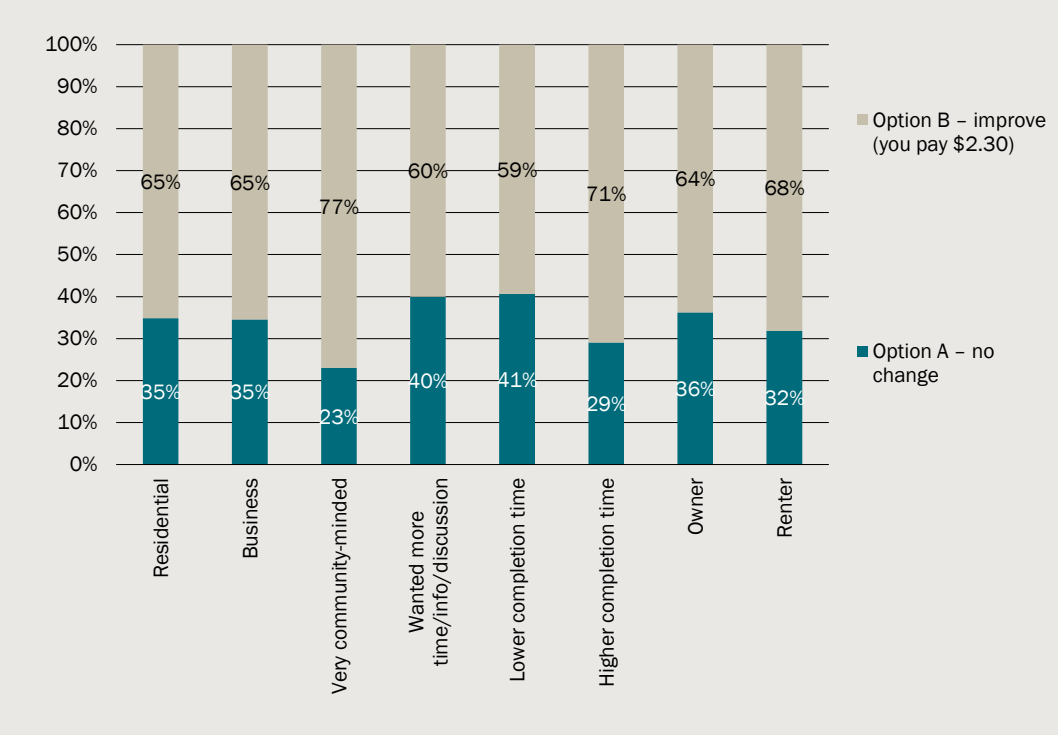


Initial choice n=1404, Final choice n=1404, -$100 base n=467, +$0 base n=468, +$100 base n=469
Data source: CIE

Option B was the preferred option for both households and businesses and for both property owners and renters. The stronger preference for Option B observed at the deliberative forums (87 per cent rather than 65 per cent) can be explained in part by:

- the more community-minded thinking that tends to occur at forums, since a stronger preference for Option B (77 per cent) was observed among respondents who indicated they thought about the community a lot when making their choices; and
- the additional time and information made available at the forums, since a weaker preference for Option B (59 and 60 per cent) was observed among respondents who completed the questionnaire more quickly or who indicated they were unsure about some of their choices because they needed more time or information or would have liked to discuss the options with other people.

5.20 Survey respondent preferences for ocean outfalls options, by characteristics



Residential n=1161, Business n=243, Very community-minded n=573, Wanted more tine/info/discussion n=370, Lower completion time n=699, Higher completion time n=705, Owner n=961, Renter n=443

Data source: CIE

Rainwater in the stormwater system

- **Option B – inspection program and problems fixed at no extra cost to individual customers at an annual ongoing bill impact of -$3.00 – was the preferred option in final choices made at both forums (82 per cent) and in the online survey (72 per cent compared to 15 per cent for the 'no change' option)**
- **This finding is consistent with the results from the Phase 2 deliberative forums in which there was strong support for this options, albeit with slightly different cost estimates**

Deliberative forums

The next topic discussed was one that was also covered in the Phase 2 forums – the problem of rainwater in the wastewater system leading to wastewater overflows in wet weather.

Again, Sydney Water presented the relevant information to customers. It was explained that an increase in wastewater overflows can be due to:

- Private plumbing faults/disrepair including broken or cracked private lines; or

- Illegal stormwater connections to the wastewater system resulting in an increase in rainwater that the system cannot cope with.

Typically Sydney Water sizes pipes around four times the capacity they think it needs to hold during dry weather, to allow for some excess water getting in during wet weather.

However, when Sydney Water's pipe exceeds full capacity, maintenance covers can be lifted off and an overflow occurs, or the overflow can occur on someone's property. Typically, properties that experience the overflows are downstream of the problem.

Sydney Water presented three possible options for this problem. Option A involved no change – Sydney Water continues to build bigger pipes, storages and more overflow points to deal with this issue at no cost, or cost saving to customers. Option B and C involved fixing the problem at the source in targeted areas, where there is a high rate of infiltration to the system so required no infrastructure to be built. In Option B it was explained that Sydney Water would fix the problem and recover the cost from all customers, and in Option C - the cost would only be recovered from the customers with the problems. Since in these options there is no infrastructure expenditure, there would actually be a cost saving to customers - $3.00 for Option B and $4.60 for Option C. However, under Option C the individual customers with the problem would pay, which on average would be around $8 500.

Sydney Water explained that based on the Phase 2 results, customers strongly supported fixing the problem at the source, so moving away from option A towards Option B.

Initial choice

Many participants remembered discussing this topic in Phase 2 and their views had not changed. Most still preferred Option B – to tackle the problem at the source and cover the cost across the whole customer base (82 per cent).

"I would rather B in case I am the one with the problem!" Campbelltown forum participant

"Most of the things causing the problems aren't the home owners fault" Campbelltown forum participant

The reasons for this choice were that they believed that it is better to fix the issue (inspect and replace pipes) rather than just coping with the consequences of it (by building bigger pipes and overflows). They preferred the option of spreading the cost in case they are one of the customers with the issue and would have to pay around $8 500.

They also believed that in most cases the home owner with the problem is not to blame and often they do not even know about the problem. There was concern about if Option C was chosen and the $8 500 bill landed with a pensioner or someone on a low income.

"It is not fair to make someone pay a large sum of money if they inherit the issue, unaware that it could be on their property." CBD forum participant

"Under A they don't solve the issue. It's an ongoing thing." CBD forum participant

Option A seemed to many to be a bit of a waste of money as the problem may get worse in the long run and Sydney Water would have to keep building bigger and bigger pipes and overflows. Participants preferred that they work proactively to fix the issue.

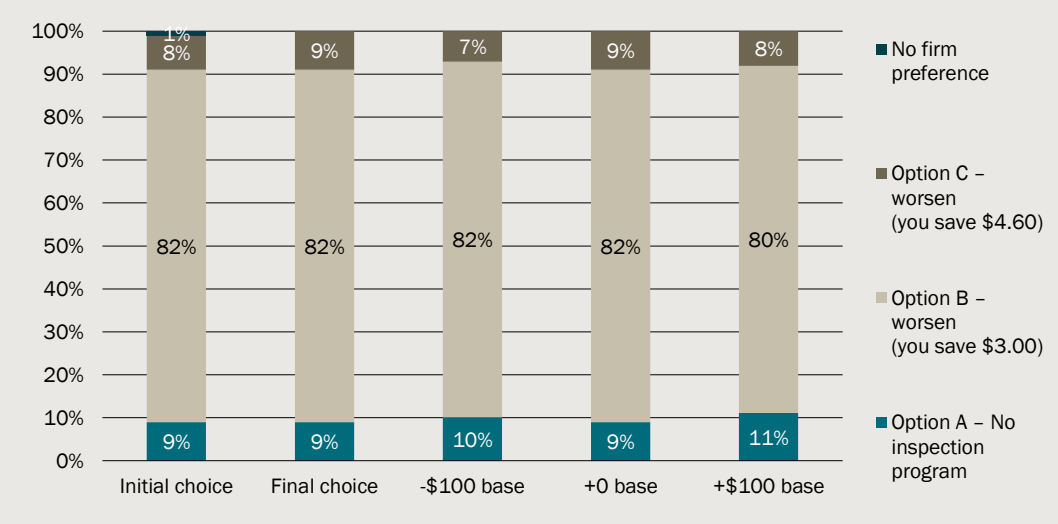
Final choice

Following the initial choices made for all the topics, participants calculated their total bill impact and re-visited their choices. There was no change in preference with 82 per cent still choosing Option B.

Lower and higher bill scenarios

Participants were then asked if they would alter their choices based on a potential overall price decrease of $100, as well as an increase of $100. As shown in figure 5.21, there was no real change in preference for either scenario.

5.21 Rainwater in the wastewater system preferences with final choice and pricing changes



If your bill were to go down by $100 a year, which option would you choose for rainwater in the wastewater system? and If your bill were to go up by $100 a year, which option would you choose for rainwater in the wastewater system?

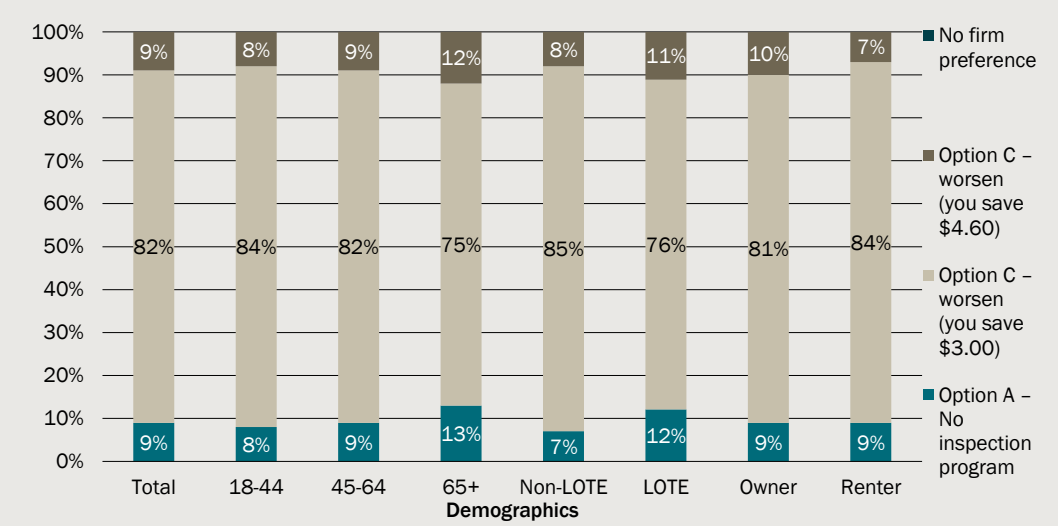
Base: All respondents n=549

Data source: CIE/Woolcott

Demographic differences

There were no demographic differences in preferences for this topic. However, those in Hornsby (92 per cent) and Campbelltown (91 per cent) were more likely to choose Option B. Hurstville participants were more likely to choose Option C (22 per cent) and those in Wollongong were more likely to choose Option A (17 per cent) than the total sample.

5.22 Final rainwater in the wastewater system preferences by demographic



For your final choice for rainwater in the wastewater system, which option did you choose?

Base: All respondents n=549; 18-44 (n=263), 45-64 (n=178), 65+ (n=103), Non-LOTE (n=436), LOTE (n=113), Owner (n=390), Renter (n=150)

Data source: CIE/Woolcott

Discussion groups

Almost two thirds of participants in the discussion groups chose Option B at a cost saving of $3.00 per annum (64 per cent).

Speakers of languages other than English

Overall, around half of participants in the LOTE groups preferred Option B to address rainwater and groundwater in the wastewater system (51 per cent) with 40 per cent choosing Option A, but again there was a split between the different language groups.

The majority of Greek, Mandarin and Vietnamese speaking participants supported Option A as they wanted to see Sydney Water continue doing what they are doing to build bigger pipes, storages and overflows as they see this as important in the short- and longer-term. They believed that Option B alone would not be enough to stop the problem of wastewater overflows occurring.

> *"The work in Option A is important. If they stopped building bigger pipes then flooding problems might occur."* Mandarin speaking participant

Some participants raised objections to Option A. For example, it was believed that Sydney Water would continue to accommodate the problem of rainwater in the wastewater system, rather than pre-emptively inspecting and fixing issues. Participants also believed that Option A does not solve the problem of pipes being diverted into the wastewater system illegally.

On the other hand, the majority of Arabic, Hindi and Cantonese speaking participants supported Option B. Arabic speaking participants thought that this option benefits all because it ends up with a net saving of $3 per year for everyone. Cantonese participants

thought that Option B would be a 'win-win' situation as they would save a small amount of money on their water bill annually and Sydney Water will fix any problems.

> *"Last time we agreed that it was too much if a person has to pay thousands of dollars to fix problems themselves, because it could be us who needs to pay that, so that option is out."*
> *Vietnamese speaking participant*

Most participants objected to Option C on the basis that problems would need to be fixed by individual customers and this could cost upwards of $8 500 - this was considered a heavy penalty and too expensive for individual households. Some participants did not like the idea of having to pay this amount themselves.

There were, however, one or two participants across the groups who supported Option C, believing that those who connect pipes illegally should be paying $8 500 to fix the problem they caused as a way of discouraging 'illegal works'.

Results for this topic were similar in the event of a bill increase or decrease.

Financially-vulnerable customers

The majority of the participants in the financially vulnerable groups chose Option B (12 out of 14). The preferred option did not change in the higher and lower bill scenarios.

Small-medium businesses

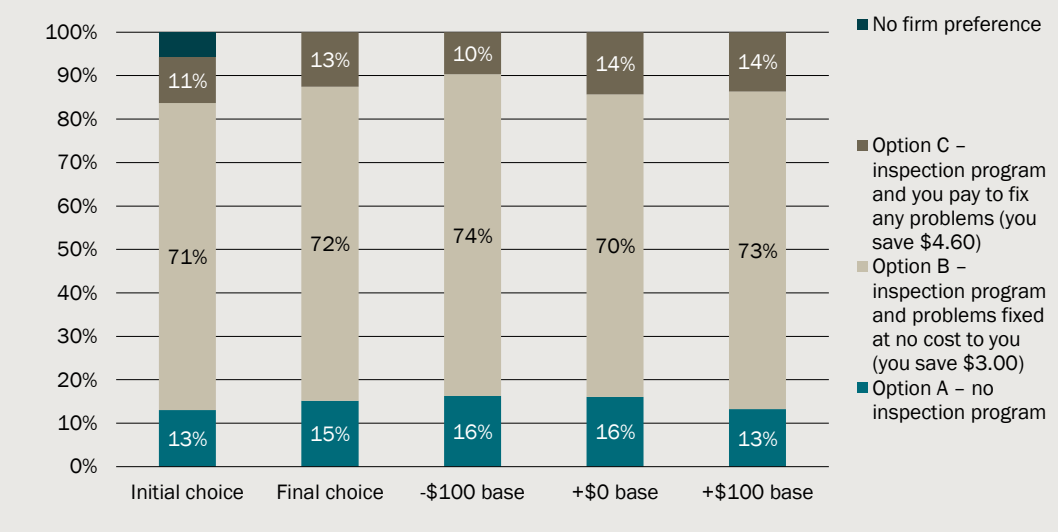
The majority of the participants in the small and medium business groups chose Option B (14 out of 15). The preferred option did not change in the higher and lower bill scenarios.

Online survey

The option preferred by survey respondents was Option B – an inspection program with problems fixed at no extra cost to the individual customer at a permanent annual bill impact of -$3.00. It received 72 per cent of the final choices, with the next highest option – the 'no inspection program' option – receiving only 15 per cent. The 95 per cent confidence intervals on final choice are around ±2.5 percentage points. Since the vote for Option B was 57 percentage points higher than the next-most-popular option, we can conclude with a high level of confidence that Option B would be the preferred option if we surveyed Sydney Water's entire customer base.

Varying the base bill impact did not result in significantly different preferences, with the vote for Option B varying from 70 to 74 per cent. This variation is within the bounds of sampling uncertainty, with 95 per cent confidence intervals on each of the three subsamples being around ±4.5 percentage points.

5.23 Survey respondent preferences for inspection options, by framing

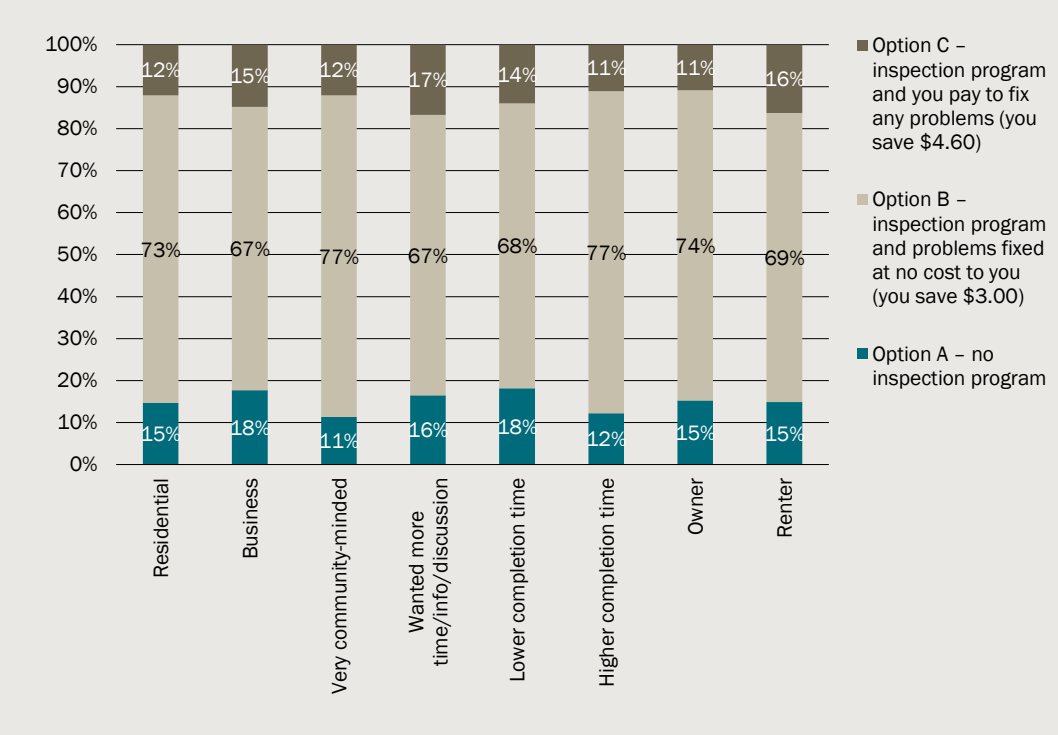


Initial choice n=1404, Final choice n=1404, -$100 base n=467, +$0 base n=468, +$100 base n=469
Data source: CIE

Option B was the preferred option for both households and businesses and for both property owners and renters. The stronger preference for Option B observed at the deliberative forums (82 per cent rather than 72 per cent) can be explained in part by:

- the more community-minded thinking that tends to occur at forums, since a stronger preference for Option B (77 per cent) was observed among respondents who indicated they thought about the community a lot when making their choices; and
- the additional time and information made available at the forums, since a weaker preference for Option B (68 and 67 per cent) was observed among respondents who completed the questionnaire more quickly or who indicated they were unsure about some of their choices because they needed more time or information or would have liked to discuss the options with other people.

5.24 Survey respondent preferences for inspection options, by characteristics



Residential n=1161, Business n=243, Very community-minded n=573, Wanted more tine/info/discussion n=370, Lower completion time n=699, Higher completion time n=705, Owner n=961, Renter n=443

Data source: CIE

Digital meters

- **Option A – no change – was the preferred option in final choices made at both forums (72 per cent) and in the online survey (61 per cent), though only 50 per cent of businesses surveyed supported this option**
- **This finding is consistent with the Phase 2 research, since the estimated average household willingness to pay for digital meters of $12 per year is lower than the cost of Option A ($14.30 per year), while the estimated median willingness to pay of small-to-medium businesses, at $15, was similar to the cost of Option A**

Deliberative forums

The final topic presented and discussed at the forums was digital meters. Participants heard that digital meters can provide more frequent information about water usage, allow for Sydney Water to send notifications on water use and enable customers to access more detailed data and compare their usage with similar households. They heard that the notifications could involve:

- Leak alerts including notifying if a customer has continual flow at their property over 24 hours which could be useful for identifying a continually running toilet or a hidden leak.

- Bill predictions - Sydney Water could send customers an estimate of their next water bill which could help customers manage their finances by avoiding unexpected changes in quarterly bills.
- High use alerts when daily use goes over a specified amount e.g. watering systems that have been left on, or hoses being used to top up swimming pools.
- Check-in alerts to provide information about water usage at other properties e.g. being notified when water use is zero for elderly relative.

An online portal would enable customers to access usage data in more detail.

Option A was presented as the current situation – use of traditional meters for no extra cost to customers and Option B was the introduction of digital meters. This option would see digital meters installed in all new properties, then retro-fit into existing properties over a 10 - 15 year period. So by the end of the rollout, all properties will have a digital meter. It was explained that Option B would cost an extra $14.30 a year once all meters are installed, so the bill impact would go up over time, until the end of the roll-out when all customers would be paying $14.30 a year.

In the phase 2 surveys, the results showed that customers were willing to pay up to $12 a year for this.

Initial choice

Most participants favoured Option A, Sydney Water doing what they are currently doing, i.e. no introduction of digital meters at no extra cost to the customer (70 per cent). Although they understood that they would not be paying $14.30 initially and that the cost would rise over 15 years, many participants thought that the final cost of $14.30 was too high for the potential benefits digital meters provided. There was a presumption that digital meters should actually provide cost benefits to Sydney Water in the long run, which should therefore result in lower costs for customers. However, this was not evident in the permanent cost increase of $14.30 a year.

"I can see benefits of it but not for $14 a year." Campbelltown participant

"The installation is a once off cost! Why do they keep charging us $14 after that?" Hurstville participant

Some were concerned about the potential loss of jobs that would occur with the introduction of digital meters, in that meter readers would not be required.

"Getting rid of the meter readers is like getting rid of check out staff in supermarkets. It's bad for Australia and bad for the economy." Penrith participant

Many participants suggested that people would not really be interested in monitoring their water usage to the degree provided by digital meters, so they would not actually be providing useful information.

> *"No one cares about monitoring their water use hour by hour."*
> *Penrith participant*

There were some concerns about all the information that could be available and accessed with the use of digital meters, and the security risk posed by having all this information in the online portal. Some even went as far as saying that it seemed quite like 'Big Brother' watching and controlling their water use.

Participants requested an 'opt in' system whereby individual customers could choose to have a digital meter if they wanted one, rather than the 'all or nothing' proposal put forward. They believed that this is what has happened in the electricity industry.

Those who preferred Option B – the introduction of digital meters often did so because they believed that all industries are moving towards the digital environment and that it is only a matter of time before they come in anyway. They thought that Sydney Water should be seen to be 'moving with the times' and introducing this now, rather than waiting, particularly with the move to digital meters in the electricity sector. However, there were also concerns that technology is moving so fast that in 15 years' time the digital meters brought in now could be obsolete.

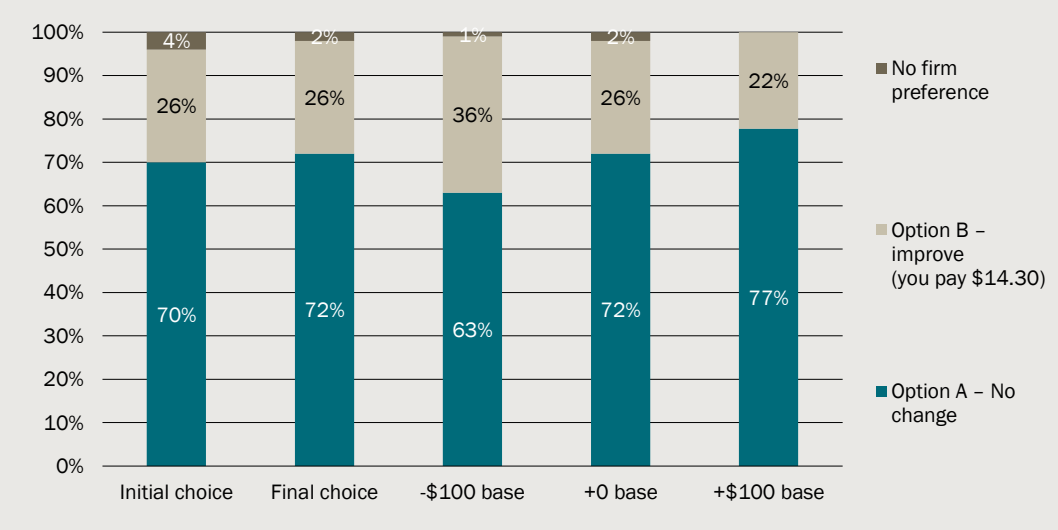
Final choice

Again, after participants had made their choices for all the topics, they evaluated them in the light of the total bill impact. There was very little change in preference for digital meters with 72 per cent choosing Option A (compared to 70 per cent in the initial choice).

Lower and higher bill scenarios

Participants were then asked if they would alter their choices based on a potential overall price decrease of $100, as well as an increase of $100. As shown in figure 5.25, there was some change in preference if the overall bill was to decrease by $100, with 36 per cent then choosing Option B (the introduction of digital meters), however around two thirds still chose Option A (63 per cent). With a bill increase of $100 the proportion choosing digital meters reduced to 22 per cent with 77 per cent choosing Option A (no digital meters).

5.25 Digital meter preferences with final choice and pricing changes



If your bill were to go down by $100 a year, which option would you choose for digital meters? and If your bill were to go up by $100 a year, which option would you choose for digital meters?

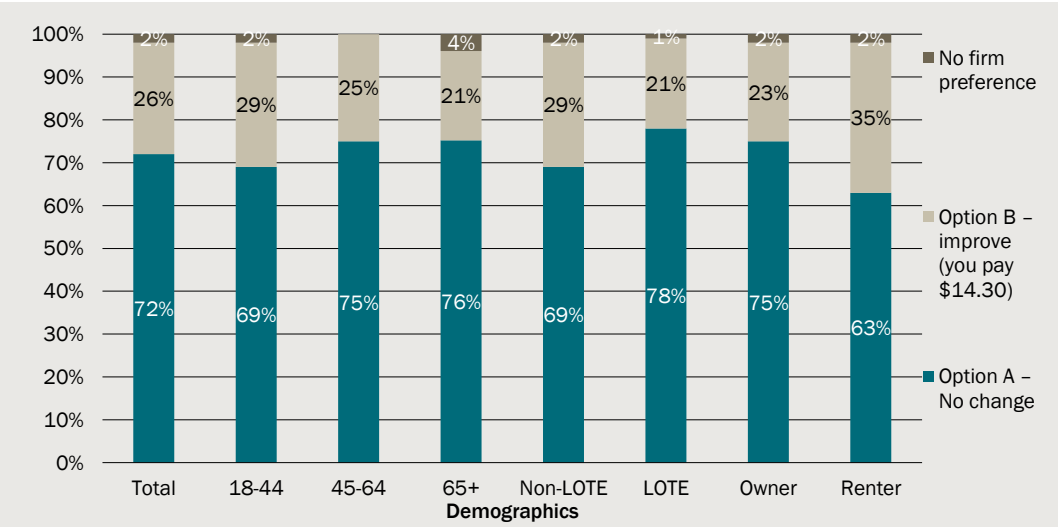
Base: All respondents n=549

Data source: CIE/Woolcott

Demographic differences

Renters were more likely to choose Option B (introduction of digital meters) than owners (35 per cent and 23 per cent respectively), however overall they were still most likely to choose Option A (63 per cent). Those in Wollongong were least likely to choose Option B (10 per cent).

5.26 Final digital meter preferences by demographics



For your final choice for digital meters, which option did you choose?

Base: All respondents n=549; 18-44 (n=263), 45-64 (n=178), 65+ (n=103), Non-LOTE (n=436), LOTE (n=113), Owner (n=390), Renter (n=150)

Data source: CIE/Woolcott

Discussion groups

Those in the discussion groups actually had a different viewpoint to the deliberative forums as they marginally preferred Option B – the introduction of digital meters (58 per cent).

Speakers of languages other than English

There was a mix in views about digital meters in the LOTE groups with roughly half supporting each option (final choice: 51 per cent Option A, 49 per cent Option B). Again, there was a difference in opinion between the language groups.

"I am using a smart meter for electricity. It is not accurate. The usage they showed on my phone could be significantly different every day." Cantonese speaking participant

"It's a good idea but it is not very useful. I do not really care about these alerts." Mandarin speaking participant

The majority of Cantonese, Mandarin and Vietnamese speaking participants preferred Option A - Sydney Water to continue using non-digital meters. Several reasons were cited for preferring Option A, including no change in costs to customers' bills and the belief amongst some participants that accuracy for billing purposes could not be guaranteed. Some participants also believed that any advantages in the roll-out of digital meters would be weighted in Sydney Water's favour – i.e., Sydney Water would be saving costs and resources by digitalising their meter system, but these benefits would not be shared with customers. Overall, these participants reported that they were happy with the current system.

The majority of Greek, Hindi, and Arabic speaking participants, on the other hand, supported Option B, which would see the introduction of digital meters over a 15-year roll-out period. Participants acknowledged that they will have to eventually change to digital meters as well as acknowledging the potential benefits associated with alerts, notifications, bill predictions etc. The incremental increase to household bills, by about $1 per year until all meters have been installed (which would result in an extra $14.30 each year once all meters have been installed), was considered acceptable by the majority of participants.

"Why is it that they want to charge $14.30 per year when everything moves to digital? They'd save a lot on wages, on staff, they should pass the saving to us, why do they want to charge more?" Vietnamese speaking participant

"We need to move towards the future… this is going to happen anyways … we might as well accept it now." Hindi speaking participant

"It is not just about the money, it is a great initiative. It gives you a peaceful mind because if something goes wrong, they will notify you." Greek speaking participant

In the event of a bill increase of $100 Option A (traditional meters) received 62 per cent support.

Financially-vulnerable customers

Most participants in the financially vulnerable groups chose Option B – the introduction of digital meters as it was believed that they may provide benefits in terms of saving money, for example by detecting leaks, in the longer term (11 out of 14). Many of these customers also only paid the usage proportion of the bill so assumed that the meter costs would be added to the fixed component and therefore they probably wouldn't have to pay for these benefits.

In the scenario of a bill decrease of $100, 12 out of 14 participants chose the digital meter option (Option B). Even in the event of a bill increase, 11 of the 14 participants chose Option B, showing strong support for the introduction of digital meters amongst this small sample.

Small-medium businesses

Most small and medium business customers also chose Option B as it was assumed that meters may provide benefits to businesses in terms of cost savings (11 out of 15).

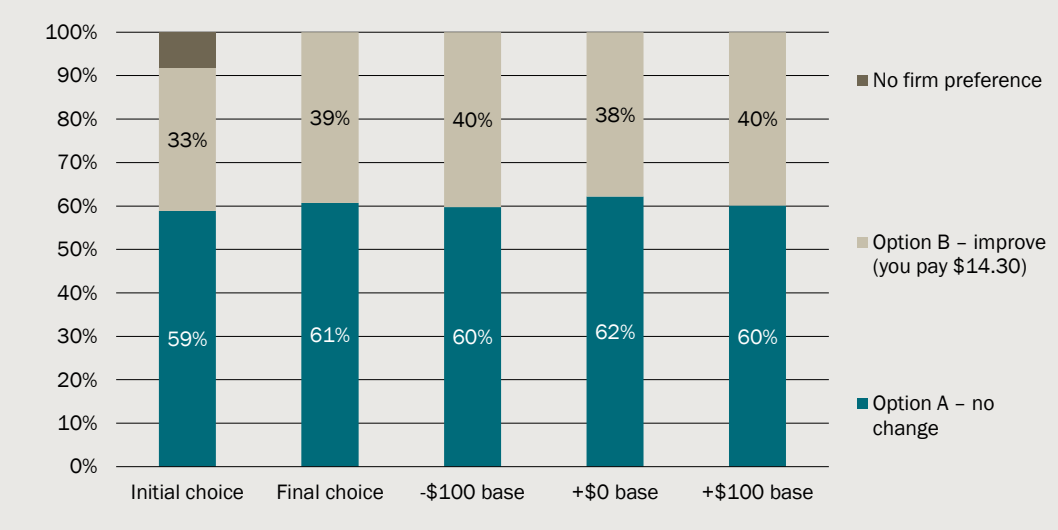
In the scenario of a bill decrease of $100, 14 out of 15 participants chose the digital meter option (Option B). After further consideration and discussion, even in the scenario of a bill increase of $100 there was strong support for the introduction of digital meters with 13 of the 15 small and medium business participants choosing Option B.

Online survey

The option preferred by survey respondents was Option A – no change. It received 61 per cent of the final choices, with the 'improve' option receiving only 39 per cent. The 95 per cent confidence intervals on final choice are around ±2.5 percentage points. Since the lower bound of the confidence interval for Option A of 58.1 per cent is above the 50 per cent plus one vote needed for a majority, we can conclude with confidence that Option A would be preferred by a majority if we surveyed Sydney Water's entire customer base.

Varying the base bill impact did not result in significantly different preferences, with the vote for Option A varying from 60 to 62 per cent. This variation is well within the bounds of sampling uncertainty, with 95 per cent confidence intervals on each of the three subsamples being around ±4.5 percentage points.

5.27 Survey respondent preferences for digital meters options, by framing

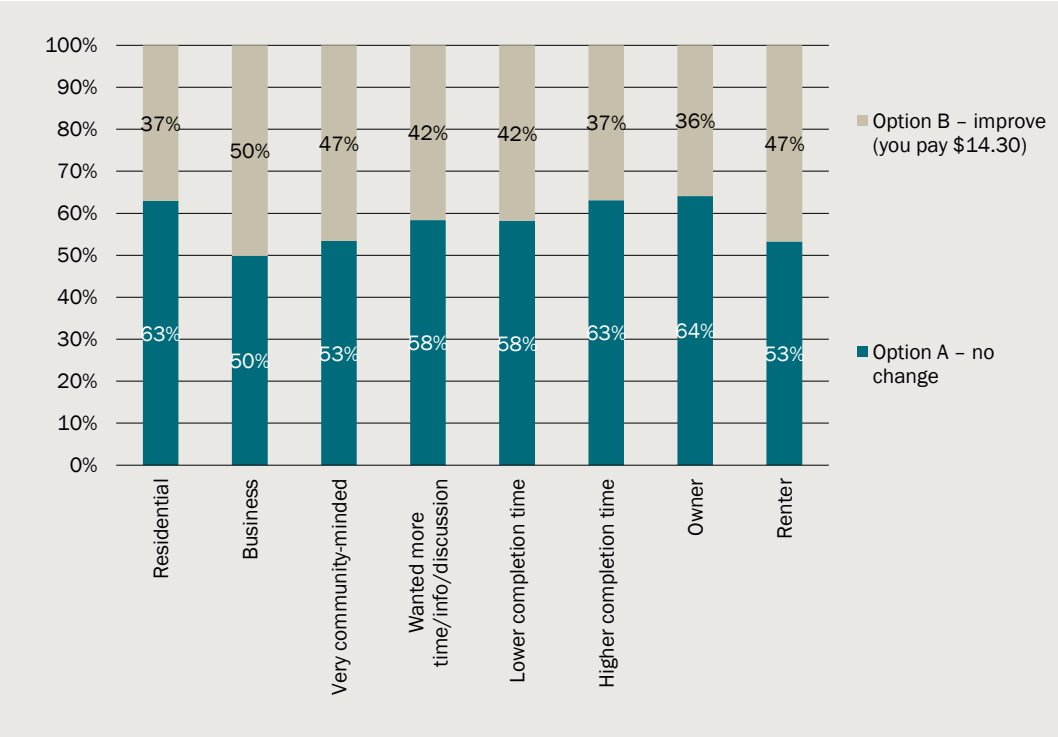


Initial choice n=1404, Final choice n=1404, -$100 base n=467, +$0 base n=468, +$100 base n=469

Data source: CIE

While a majority of households preferred Option A, businesses were evenly split, with 50 per cent voting for the installation of digital meters. Renters were also less likely to vote for Option A than property owners (53 vs 64 per cent), potentially because some expected their landlords would bear some or all of the cost.

5.28 Survey respondent preferences for digital meters options, by characteristics



Residential n=1161, Business n=243, Very community-minded n=573, Wanted more tine/info/discussion n=370, Lower completion time n=699, Higher completion time n=705, Owner n=961, Renter n=443

Data source: CIE

Waterway health improvement program

- **Option B – improve waterway health at an annual ongoing bill impact of $2.90 – was the preferred option in final choices made in the online survey (67 per cent)**
- **This finding is consistent with the research undertaken by Sydney Water with Gillespie Economics, since the estimates of average customer willingness to pay derived from that study exceed $2.90 per stormwater customer per year when applied to the forecast service outcomes from Option B**

Stormwater pollution affects the health of creeks and rivers in Sydney. Sydney Water is considering a program to improve waterway health across Sydney (in the catchments of the Georges, Cooks and Parramatta Rivers).

As part of the program, Sydney Water would:

- Plant and maintain native vegetation in open spaces and near creeks and waterways
- Create and maintain wetlands near stormwater channels
- Construct recreation facilities such as bicycle and pedestrian paths, seating and shelters, boardwalks and viewing platforms at these locations
- Install trash racks and booms in waterways to collect litter

Over time, this would increase the amount of river length that supports healthy populations of fish and birds.

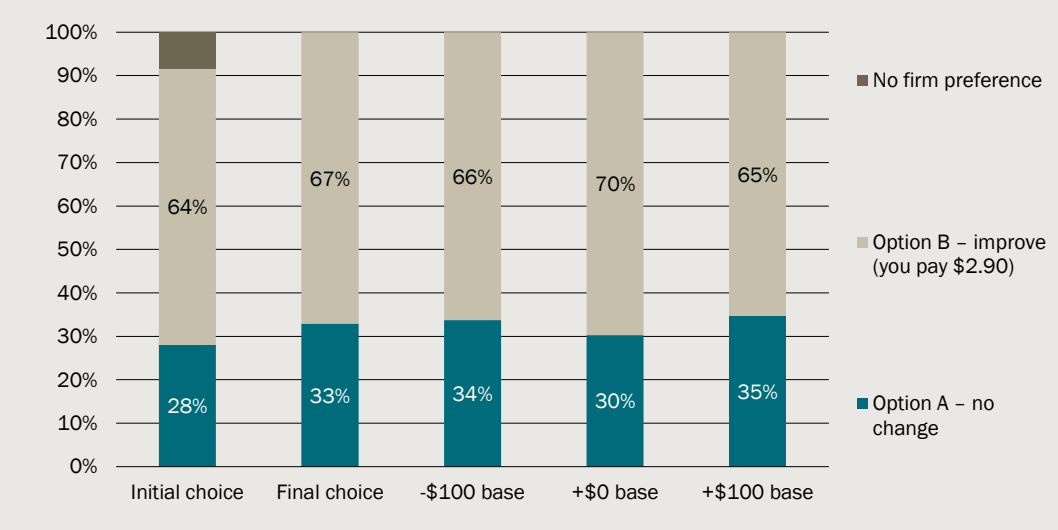
Respondents were presented with two options. Option A involved a continuation of the current approach, with no impact on customer bills. Option B was the waterway health improvement program, which involved specified improvements in the length of rivers in good health in 30 years' time, the amount of native vegetation planting, the number of recreational facilities and the amount of rubbish and litter removed, at an ongoing cost to customers of $2.90 per year.

Online survey

The option preferred by survey respondents was Option B – improve waterway health at a permanent annual bill impact of $2.90. It received 67 per cent of the final choices, with the 'no change' option receiving only 33 per cent. The 95 per cent confidence intervals on final choice are around ±6.5 percentage points. Since the lower bound of the confidence interval for Option B of 61.0 per cent is well above the 50 per cent plus one vote needed for a majority, we can conclude with confidence that Option B would be preferred by a majority if we surveyed Sydney Water's entire customer base.

Varying the base bill impact did not result in significantly different preferences, with the vote for Option A varying from 65 to 70 per cent. This variation is well within the bounds of sampling uncertainty, with 95 per cent confidence intervals on each of the three subsamples being around ±10.5 percentage points.

5.29 Survey respondent preferences for waterway health options, by framing

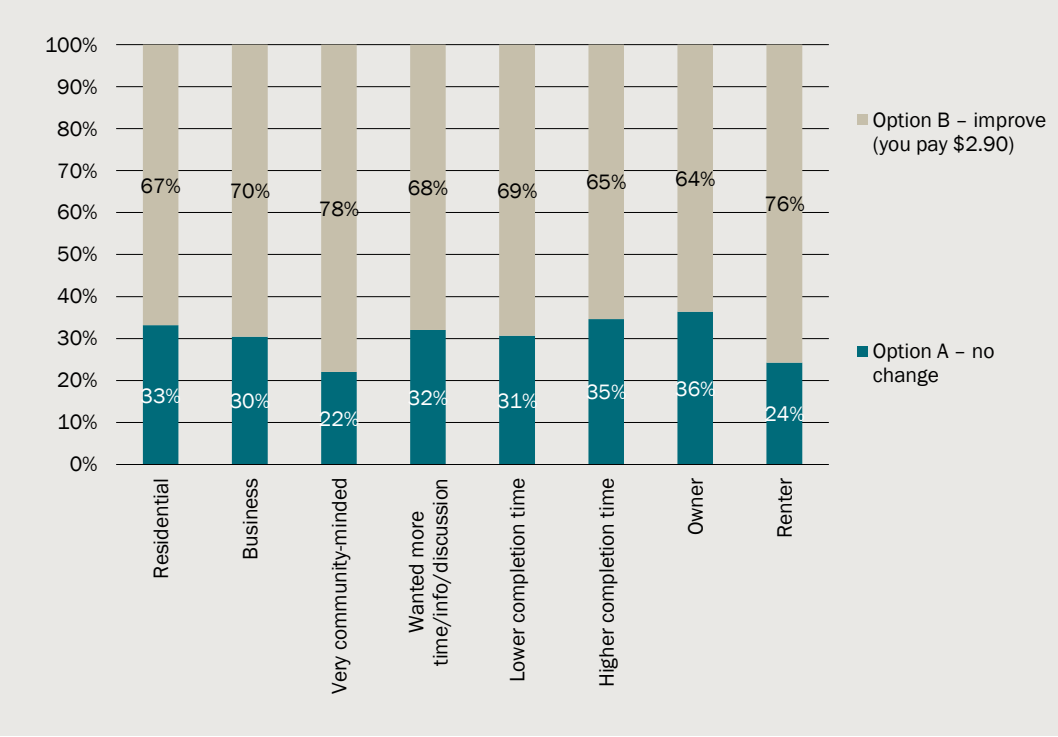


Initial choice n=228, Final choice n=228, -$100 base n=80, +$0 base n=76, +$100 base n=72

Data source: CIE

Option B was the preferred option for both households and businesses and for both property owners and renters.

5.30 Survey respondent preferences for waterway health options, by characteristics



Residential n=205, Business n=23, Very community-minded n=118, Wanted more tine/info/discussion n=53, Lower completion time n=101, Higher completion time n=127, Owner n=162, Renter n=66

Data source: CIE

A Deliberative forum agenda

Deliberative Agenda CBD – 29/11/2018

Project	Sydney Water CIPA Phase 3
Event	Deliberative forum
Details:	
Dates/ locations /times	29/11/18 CBD CITY TATTERSALS CLUB 194-204 PITT STREET SYDNEY 5.30-9.00pm
Forum outcomes	• To communicate the outcomes of phase 2. • To confirm the options for the negotiables that customers are willing to pay for in the context of a lower, medium and higher base case.

Time	Session details	Responsibility	Materials
	Pre-forum • Provide participants handout and filming/photography permission forms • Put 'bill levels of types of users' on tables for people to look at		
5.30pm	**Plenary: Welcome** • Woolcott Research Lead Facilitator to welcome and thank participants for coming (back). • Acknowledgement to Country • Overview of forum agenda and approach, the key sessions, guidelines and housekeeping. • Location of toilets and evacuation in emergency. • Introduce opening speaker	WR Lead Facilitator	
5.35pm	**Presentation 1a: Welcome (back) and introduction to SW** • Recap on role of SW and about the organisation • Recap of engagement plan • Objectives of phase 3 and what we hope to get out of the forums	SW	PP slides
5.40pm	**Presentation 1b: Summary of Phase 2 findings** • This is not the main focus of tonight but we wanted to provide you with a brief recap of tariff structure findings from phase 2	SW	PP slides
5.45pm	**Table discussion 1: Reactions to Phase 2 findings** • Go round table and introduce • Reactions to what they heard. Does it align with what they remember/what they think?	WR Table Facilitators	
5.50pm	**Plenary: Keypad polling**	WR Lead Facilitator	Keypads and PP Slides

	Lead facilitator to introduce keypads and do some warm up questions. Results shown on screen. Q. How long is your average length of shower or how long on average do you spend filling up the bath? 1. Less than a minute 2. 1-4 minutes 3. 5-9 minutes 4. 10-29 minutes 5. 30-59 minutes 6. 1 hour or more 7. I never shower or bath REAL QUESTIONS: Q. How much water do you use on average? 1. 0-25kL a quarter, bill up to $230 2. 26-50kL a quarter, bill up to $280 3. 51-75kL a quarter, bill up to $330 4. 76-100kL a quarter, bill up to $380 5. Over 100kL a quarter, bill over $380 6. Don't know Q. . Overall, do you support Sydney Water's proposal for water prices, with a usage charge of $2.13 per kilolitre? 1. Strongly support 2. Moderately support 3. Do not support 4. Don't know Q. Overall, do you support Sydney Water's proposal for residential wastewater prices, to keep these as a fixed charge only? 1. Strongly support 2. Moderately support 3. Do not support 4. Don't know		
6.00pm	**Presentation 2: Introduction to the activity tonight** • Bill breakdown – how the money is spent by SW • Bill – 2019-20 to 2020-21, uncertainty due to external factors e.g. interest rates • Outline of the way we will be presenting the information tonight – i.e. 2-3 options for a set of 5-6 topics • We want to know which one they would prefer for each. • They will have a chance to go back and change selections towards the end of the evening when they review the total bill impact. • If they choose the most expensive options for each topic then this would result in a total bill impact of..	SW	PP slides
6.10pm	**Presentation 3: Water interruptions** • Outline the topic • Present the options and associated costs	SW	PP slides
6.15pm	**Table discussion 3: water interruptions** • Facilitator to outline the exercise – we are going to ask participants to choose the options they would like for each topic and at the end will be able to see the impact on their total bill (explain that they will be able to change their choices later once they see the whole impact on their bill) ***HANDOUT 1*** • What do they think of the options for water interruptions? • What are the pros and cons of each option?	WR Table Facilitators	HANDOUT 1

	• Which option do they prefer for water interruptions? Why? ***Give out activity sheet 1 (which is no change to the current bill)*** • Participants to fill out only the first section of their activity sheet NOT the 'final' choices yet….		ACTIVITY SHEET 1
6.25pm	**Keypad voting on water interruptions**	WR Lead Facilitator	Keypads and PP Slides
6.25pm	**Presentation 4: Water pressure** • Outline the topic • Present the options and associated costs	SW	PP slides
6.30pm	**Table discussion 4: water pressure** ***HANDOUT 2*** • What do they think of the options for water pressure? • What are the pros and cons of each option? • Which option do they prefer for water pressure? Why? ***Ask them to fill in this section of their activity sheet***	WR Table Facilitators	ACTIVITY SHEET 1 HANDOUT 2
6.35pm	**Keypad voting on water pressure**	WR Lead Facilitator	Keypads and PP Slides
6.35pm	**DINNER**	WR Lead Facilitator	PP slides and keypads
7.00pm	**Presentation 5: Wastewater overflows** • Outline the topic • Present the options and associated costs	SW	PP slides
7.05pm	**Table discussion 5: Wastewater overflows** ***HANDOUT 3*** • What do they think of the options for wastewater overflows? • What are the pros and cons of each option? • Which option do they prefer for wastewater overflows? Why? ***Ask them to fill in this section of their activity sheet***	WR Table Facilitators	ACTIVITY SHEET 1 HANDOUT 3
7.15pm	**Keypad voting on wastewater overflows**	WR Lead Facilitator	Keypads and PP Slides
7.15pm	**Presentation 6: Wastewater ocean outfalls** • Outline the topic • Present the options and associated costs	SW	PP slides
7.20pm	**Table discussion 6: Wastewater ocean outfalls** ***HANDOUT 4*** • What do they think of the options for wastewater ocean outfalls? • What are the pros and cons of each option? • Which option do they prefer for wastewater ocean outfalls? Why? ***Ask them to fill in this section of their activity sheet***	WR Table Facilitators	ACTIVITY SHEET 1 HANDOUT 4
7.30pm	**Keypad voting on wastewater ocean outfalls**	WR Lead Facilitator	Keypads and PP Slides
7.30pm	**Presentation 7: Rainwater in wastewater system** • Outline the topic • Present the options and associated costs	SW	PP slides

7.35pm	**Table discussion 7: Rainwater in wastewater system** ***HANDOUT 5*** • We have discussed this before but the costs are a little different (and some new people) so what do they think of the options for rainwater in wastewater system? • Which option do they prefer for rainwater in wastewater system? Why? ***Ask them to fill in this section of their activity sheet***	WR Table Facilitators	ACTIVITY SHEET 1 HANDOUT 5
7.45pm	**Keypad voting on rainwater in wastewater system**	WR Lead Facilitator	Keypads and PP Slides
7.45pm	**DESSERT**		
7.55pm	**Presentation 8: Digital meters** • What digital meters are and the notification and website features they would enable • Present relevant findings from phase 2 WTP study • Present costs / bill impacts • Present our understanding of customers' preferred option based on cost-benefit analysis	SW	PP slides
8.00pm	**Table discussion 8: Digital meters** ***HANDOUT 6*** • What do they think of the options for digital meters? • What are the pros and cons of each option? • Which option do they prefer for digital meters? Why? ***Ask them to fill in this section of their activity sheet***	WR Table Facilitators	ACTIVITY SHEET 1 HANDOUT 6
8.10pm	**Keypad voting on digital meters**	WR Lead Facilitator	Keypads and PP Slides
8.10pm	**Table discussion: Bringing it all together for medium base case** ***Calculators available on tables (or participants use their phones)*** • Participants to add up their choices on their activity sheets and see overall bill impact. • Are they happy with the overall bill impact? • If not, they now have a chance to change any previous choices on their activity sheet and select new options in the second column, to create a bill impact they are happy with. • Discuss reasons for any changes.	WR Table Facilitators	ACTIVITY SHEET 1 Calculators
8.20pm	**Keypad voting on activity sheet 1 – medium level base case** • Participants asked to input their final choices into the keypads for activity sheet 1 • Results shown on screen • Comparison of results for each negotiable (before and after seeing total bill impact)	WR Lead Facilitator	PP slides and keypads
8.30pm	**Presentation 7: Lower and higher base case scenarios** • Outline the possibility that the base case could be lower or higher than the current bill. We have currently only spoken about the negotiables if the bills stay as they are currently. • Moving parts – out of SW control.	SW or WR Lead Facilitator	PP slide

	• We would now like to hear from them about whether their choices would change if the base bill goes up or down.		
8.35pm	**Table discussion: Lower and higher base case scenarios** ***Give out activity sheet 2*** • Would your choices change if bills are going to go down? • Ask them to fill out the column for if the bills are lower • Discuss what they have decided to change and reasons for this. ***Refer to activity sheet 2 also has a column for higher level base case*** • Would your choices change if bills are going to go up? • Ask them to fill out the second column on activity sheet 2 for if the bills are higher. • Discuss what they have decided to change and reasons	WR Table Facilitators	ACTIVITY SHEET 2
8.45pm	**Keypad voting on activity sheet 2 – lower and higher level base case** • Participants asked to input their choices into the keypads for activity sheet 2. Do lower and higher for each topic area then show results shown on screen • Comparison of results for low, medium and high base cases	WR Lead Facilitator	PP slides and keypads
8.55pm	**Summing up, thank you** • *Sydney Water closing remarks* – what Sydney Water will take from today and confirmation of next steps.	SW	
9.00pm	**CLOSE** *Woolcott Research Lead Facilitator* – thanks and reminder to fill in **end of session questionnaire on tables**	WR All	End of session q, compensation and signing sheet

B Activity sheet 1

Activity Sheet 1 **Location:** **Keypad number:**

After your table has discussed each topic, please tick the option you prefer and write the corresponding $ amount in the column. Eg. If you prefer Option B which is an extra $0.20/yr write **+$0.20** in the column, if the option will save you $0.20/yr write in **-$0.20**, if there is no change to the bill write in **$0**. If you don't know write in "DK". Please only fill in column 2 after your table facilitator has told you to do so.

		1. Preferred options		2. Final preferred options	
Water interruptions	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: New equipment and more notice **(+$0.20/yr)**				
	3. Opt C: Repair pipes more before replacing them **(-$1.50/yr)**				
Water pressure	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Purchase and install pressure booster pumps **(+$0.20/yr)**				
Wastewater overflows	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Spend more time inspecting and replacing wastewater pipes **(+$65/yr)**				
Wastewater ocean outfalls	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Diverting untreated wastewater to treatment plant **(+$2.30/yr)**				
Rainwater in wastewater system	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Inspect private pipes and SW fixes them in targeted areas **(-$3.00/yr)**				
	3. Opt C: Inspect private pipes and individual customers pay **(-$4.60/yr)**				
Digital meters	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Introduction of digital meters **(+$14.30/yr)***				
TOTAL	**CHANGE IN ANNUAL BILL 2020-2025**				
plus	Estimate of current annual bill				
TOTAL	**ANNUAL BILL 2020-2025**				

* This is the maximum impact reached once everyone has digital meters, which would take 10-15 years.

C Activity sheet 2

Activity Sheet 2 **Location:** **Keypad number:**

Please tick the option you prefer for each topic and write the corresponding $ amount in the column. Eg. If you prefer Option B which is an extra $0.20/yr write **+$0.20** in the column, if the option will save you $0.20/yr write in **-$0.20**, if there is no change to the bill write in **$0**. If you don't know write in "DK".

		1. If your bill goes down		2. If your bill goes up	
Other factors			**-$100.00**		**+$100.00**
Water interruptions	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: New equipment and more notice **(+$0.20/yr)**				
	3. Opt C: Repair pipes more before replacing them **(-$1.50/yr)**				
Water pressure	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Purchase and install pressure booster pumps **(+$0.20/yr)**				
Wastewater overflows	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Spend more time inspecting and replacing wastewater pipes **(+$65/yr)**				
Wastewater ocean outfalls	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Diverting untreated wastewater to treatment plant **(+$2.30/yr)**				
Rainwater in wastewater system	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Inspect private pipes and SW fixes them in targeted areas **(-$3.00/yr)**				
	3. Opt C: Inspect private pipes and individual customers pay **(-$4.60/yr)**				
Digital meters	1. Opt A: Continue doing what we are doing - no change **($0)**				
	2. Opt B: Introduction of digital meters **(+$14.30*/yr)**				
TOTAL	**CHANGE IN ANNUAL BILL 2020-2025**				
plus	Estimate of current annual bill				
TOTAL	**ANNUAL BILL 2020-2025**				

* This is the maximum impact reached once everyone has digital meters, which would take 10-15 years.

D Handout 1 – Water interruptions

Handout 1: Options – Water interruptions

Sydney WATER

1. Option A No change	2. Option B Improve	3. Option C Worsen
Continue what we are doing	New technology and more notice	Repair pipes more before replacing them
No change in your water bill	You pay an extra **$0.20** each year	You save **$1.50** each year
20 **in 1000 properties**	**16** **in 1000 properties**	**24** **in 1000 properties**

E Handout 2 – Water pressure

Handout 2: Options – Water pressure

Sydney WATER

1. Option A No change	2. Option B Fix problem areas
Continue what we are doing	**Purchase and Install pressure booster pumps**
No change in your water bill	You pay an extra **$0.20** each year
130 customers experience repeat water pressure failures	**0 customers** experience repeat water pressure failures

F Handout 3 – Wastewater overflows

Handout 3: Options – Wastewater overflows

Sydney WATER

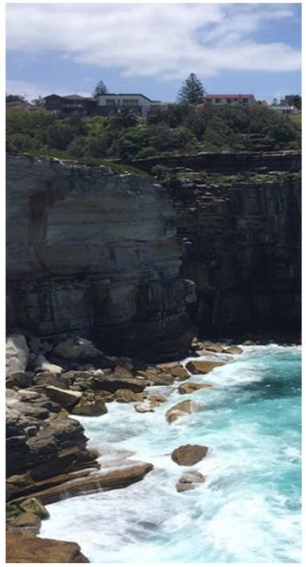
1. Option A No change	2. Option B Improve
Continue what we are doing	**Spend more time inspecting wastewater pipes**
No change in your wastewater bill	You pay an extra **$65** each year
5 in 1000 properties experience an overflow on their property each year	**3 in 1000 properties** experience an overflow on their property each year

G *Handout 4 – Untreated wastewater ocean outfalls*

Handout 4: Options – Untreated wastewater ocean outfalls

Sydney WATER

1. Option A No change	2. Option B Improve
Continue to release untreated wastewater at Sydney cliff faces	Divert untreated wastewater to treatment plant
No change in your bill	You pay an extra $2.30 each year



H Handout 5 – Rainwater in the wastewater system

Handout 5: Options – Rainwater in the wastewater system

Sydney WATER

1. Option A No change	2. Option B Improve	3. Option C Improve
Continue what we are doing	Inspect private pipes and SW fixes the problem in targeted areas	Inspect private pipes and individual customers pay
No change in your bill	You save **$3.00** each year	You save **$4.60** each year

I Handout 6 – Digital meters

Handout 6: Options – Digital meters

Sydney WATER

1. Option A
No change

Continue what we are doing

No change
in your bill

2. Option B
Improve

Introduction of digital meters

You pay an extra
$14.30
each year

J Forum recruitment screener

IF NEW PARTICIPANT:

Good morning/ afternoon, my name is _____ from Woolcott Research and I'm calling on behalf of Sydney Water [**PROVIDE EXTRA INFO IF NEEDED***]. The reason for my call is that they are holding a number of paid community forums and we are inviting a random selection of people to register their interest in taking part.

The purpose of the forum is for Sydney Water to hear your views on investment options, in other words whether you would be willing to pay more or would rather pay less for options in relation to specific services.

You do not need to know anything at all about water or wastewater services to take part.

The forum in your area is being held on [insert date from above] from [insert time above] in [insert location above]. Up to 80 community members will take part in your forum.

Tea and coffee will be provided, with a light dinner served midway through the forum. You will be given $100 at the event to compensate you for your time and to cover any expenses.

Skip to Q1

RETURNING PARTICIPANT:

Thank you again for your attendance at the Sydney Water Community forum(s) this year.

Your feedback to date has been invaluable and Sydney Water are using this to develop their Operating Licence and Pricing submissions.

They would now like to hear your views on investment options, in other words whether you would be willing to pay more or would rather pay less for options in relation to specific services. This is building on from the last phase of research. We will be hosting another forum in your area [insert location above], on [insert date above] from [insert time], and it would be great if you would be able to join us again. Sydney Water will also share some potential changes they are thinking of making to pricing structures as a result of feedback that customers provided at the last forum.

We are also expecting that we will need to find some additional attendees for this forum, in place of previous participants who are unable to attend this time. If you happen to know some people aged between 18-50 years, who are not related to you and who may be interested, we would appreciate you passing our details on, or providing their details at the end of this conversation.

1. Would you be interested in participating?

   Yes 1
   No 2 – **THANK AND TERMINATE**

Thank you. I will just need to ask you a few questions to ensure we get a good cross-section of participants. So firstly…

2. Do you, or any immediate members of your family, work for Sydney Water, any other water or wastewater utility company, IPART (the Independent Pricing and Regulatory Tribunal), a water quality related role with NSW Health* or NSW Environment Protection Authority?

*** NOTE TO INTERVIEWERS: doctors, nurses and other health practitioners are allowed in the forums PRE-POPULATE FOR RETURNING PARTICIPANTS**

   Yes 1 – **TERMINATE**
   No 2

3. Is the place you live in: **READ OUT. CHECK QUOTAS PRE-POPULATE FOR RETURNING PARTICIPANTS**

   Owned outright or with a mortgage 1
   Being rented or occupied rent-free 2
   Other (please specify) 3

4. Which of the following best describes the water and wastewater bills you receive for the residence you live in? **PRE-POPULATE FOR RETURNING PARTICIPANTS**

   I receive bills from Sydney Water 1
   I receive bills from Sydney Water and from my body corporate 2
   My landlord receives bills from Sydney Water and charges the full amount to me as a specific charge separate from rent 3
   My landlord receives bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent 4
   My landlord charges me a specific amount for water and wastewater, but I don't know how that amount relates to the Sydney Water bill 5
   I do not directly pay any amount for water and wastewater 6

5. Record gender: **CHECK QUOTAs PRE-POPULATE FOR RETURNING PARTICIPANTS**

   Male 1

Female	2
Non-gender specific	3

6. Can you please tell me your age? _____ **CHECK QUOTAS**
TERMINATE IF UNDER 18 **PRE-POPULATE FOR RETURNING PARTICIPANTS**

IF REFUSED, TRY TO GET AGE BRACKET: **PRE-POPULATE FOR RETURNING PARTICIPANTS**
Can you please tell me which of the following age groups you fall into? **READ OUT**

Under 18	1	**TERMINATE**
18-24	2	
25-34	3	
35-44	4	
45-54	5	
55-64	6	
65+	7	

7. Do you speak a language other than English at home or with family? **CHECK QUOTAS** **PRE-POPULATE FOR RETURNING PARTICIPANTS**

No, English only	1	**SKIP TO Q9**
Yes	2	**ASK Q8**

8. What is the main language spoken at home or with family other than English? **DNRO**

Arabic	1	Lebanese	14
Australian Indigenous Languages	2	Macedonian	15
Cantonese	3	Mandarin	16
Croatian	4	Polish	17
Dutch	5	Punjabi	18
French	6	Serbian	19
German	7	Spanish	20
Greek	8	Tagalog (Filipino)	21
Hindi	9	Turkish	22
Indonesian	10	Vietnamese	23
Italian	11	Other (please specify)	24
Japanese	12	Prefer not to say	25
Korean	13		

9. Are you of Aboriginal or Torres Strait Islander origin? **PRE-POPULATE FOR RETURNING PARTICIPANTS**

No	1	
Yes	2	
Prefer not to say	3	**DO NOT OFFER**

10. What is your approximate annual household income? **READ OUT PRE-POPULATE FOR RETURNING PARTICIPANTS**

Less than $41,600	1	
Between $41,600 and $78,000	2	
Between $78,000 and $104,000	3	
Between $104,000 and $156,000	4	
More than $156,000	5	
Do not wish to answer	6	**DO NOT OFFER**

11. Are you a member of any special interest groups or associations related to water? **PRE-POPULATE FOR RETURNING PARTICIPANTS**

Yes (please specify)	1
No	2

12. Do you consider yourself to have a disability?

Yes	1
No	2

If yes, what type of disability to you have? – NOT NECESSARY

_____

Thank you for providing all of this information, you have qualified to participate in the community forum and we look forward to seeing you on the day.

Just to confirm, you have agreed to attend the forum on [insert date above] from [insert time] in [insert location above].

Due to space limitations, only people who have completed this questionnaire will be able to attend on the day, and only one person per household.

Also, please can you either bring a recent bill or have a look at your usage as we will be asking you to input this at the forum (i.e. not the exact number but whether you are a low, medium or high user).

12. Could I please record your full name and contact details so we can send you a letter or email to confirm your attendance and provide all the details of the event?
PRE-POPULATE FOR RETURNING PARTICIPANTS

TITLE: _____
FIRST NAME: _____
SURNAME: _____
CONFIRM PHONE NUMBER: _____
MOBILE NUMBER: _____
1ST LINE ADDRESS: _____
2ND LINE ADDRESS: _____
SUBURB: _____
POSTCODE: _____
EMAIL ADDRESS: _____

INTERVIEWER NOTE: Repeat back all details above to check spelling

13. Would you prefer to be contacted by letter or by email?
Letter 1
Email 2 (please check your junk email folder if you have not heard from us in a few days time)

14. And finally, do you have any special needs to enable you to attend on the day? E.g. accessibility or dietary requirements (due to health, cultural or religious reasons)
_____
_____

Thank you for your time and willingness to attend. We will also give you a phone call in the week leading up to the forum to remind you of the forum and confirm attendance.

If you find you are unable to attend for any reason, please contact Melissa Homann on 02 9261 5221 as soon as possible as we will need to find a replacement for you. You can also contact Melissa or Liz if you require any further information about the forums.

K Discussion guide and handouts for small-medium business groups

Discussion Guide: *Sydney Water (Small and medium business groups)*
1.5 hours – Phase 3 (November)

Introduction (2 minutes)

Introduce yourself; welcome; explain the project and process:

- Work for an independent research company
- Doing this project for Sydney Water (water and wastewater service provider)
- The purpose of the group discussion is to find out your business's opinions on pricing issues.
- As they are a monopoly provider, they are regulated by an independent body who monitors their performance, recommends minimum standards and set their prices.
- Your views tonight are going to help with some of the decisions they need to make to develop their proposal to the regulator.
- Our role is to report back to Sydney Water on your feedback however your responses are confidential and anonymous. We report in an overall basis only and do not mention specific names, etc.
- Explain that this is the third phase of a three phased engagement program planned for this year, and that this phase is focussing on finding out which investment options customers prefer, particularly in the context of the full bill impact of these options.

Check ok to record the discussion – only for our purposes. Explain viewing (if applicable).

1. Warm up (3 mins)

Ask them to introduce themselves and a little about what their business does and their role within it.

2. Phase 2 findings (10 minutes)

Facilitator note: Ensure for all questions that they are responding with their business 'hat' on rather than residential.

Explain that this first handout provides a bit of background about SW and what they do (most will probably have seen this before – so just a refresher).

Give handout 1: Introduction to Sydney Water

Sydney Water bills are made up of fixed components and a water usage component. In forums, surveys and groups like this that were held in August this year, people told us what proportion of the charges they would like to be fixed and variable for their water supply.

Give Handout 2a: Phase 2 findings water prices

- Does this align with what you remember (for those who took part in phase 2)/what you think (for those who did not take part in phase 2)?
- Overall, do you support Sydney Water's proposal for water prices, with a usage charge of $2.13 per kilolitre? *Facilitator to get show of hands – record number. If no, why not?*

We also asked businesses about the proportion of fixed and usage charges for wastewater.

Give Handout 2b: Phase 2 findings: Wastewater prices

- Does this align with what you remember/what you think?
- Overall, do you support Sydney Water's proposal for wastewater prices, to decrease the wastewater usage charge to 60c/kL? *Facilitator to get show of hands – record number. If no, why not?*

3. Introduction to the activity (5 minutes)

EXPLAIN TO GROUP MEMBERS:
We want your views on six topics that could affect your business's bill.
In our Phase 2 surveys we asked customers about willingness to pay for a range of changes, on each of these as individual topics. This was based on a range of theoretical changes, not costed options, and only focused on one topic at a time. We have now developed some costed options. Tonight is about bringing it all together. Sydney Water will use your feedback to help make decisions about its plans for 2020-2025.

For each topic tonight there will be two or three investment options including the current option which results in no bill change. There will also be an option that would improve services but result in a cost to customers. Where applicable, there will also be an option that would worsen services and may result in a cost reduction. This is not shown where there is not a viable option.

You will be given an activity sheet that I will ask you to fill in throughout the night, as we talk about each topic, to show which option you prefer. At the end, you will have a chance to revisit your choices, add up the bill impact, and see if you want to change any of your choices.

Give Handout 3: Total bill impacts for the options

4. Water interruptions (10 minutes)

So the first topic we are going to discuss tonight is water interruptions.

Give Handout 4a and b: Water interruptions and options

- What do you think of the options for water interruptions?
- What are the pros and cons of each option?
- Which option do you prefer for your business for water interruptions? Why?

Give out activity sheet 1

- Participants to fill out water interruptions row of their activity sheet – i.e. choose which option they prefer for their business and write in first column.

5 Water pressure (5 minutes)

Give Handout 5a and b: Water pressure and options

- What do you think of the options for water pressure?
- What are the pros and cons of each option?
- Which option do you prefer for your business for water pressure? Why?

Fill in activity sheet 1

- Participants to fill out water pressure row of their activity sheet – i.e. choose which option they prefer and write in first column.

6. Wastewater overflows (10 minutes)

Give Handout 6a and b: Wastewater overflows and options

- What do you think of the options for wastewater overflows?
- What are the pros and cons of each option?
- Which option do you prefer for your business for wastewater overflows? Why?

Fill in activity sheet 1

- Participants to fill out wastewater overflows row of their activity sheet – i.e. choose which option they prefer and write in first column.

7. Untreated wastewater ocean outfalls (10 minutes)

Give Handout 7a and b: Untreated wastewater ocean outfalls and options

- What do you think of the options for untreated wastewater ocean outfalls?
- What are the pros and cons of each option?
- Which option do you prefer for your business for untreated wastewater ocean outfalls? Why?

Fill in activity sheet 1

- Participants to fill out untreated wastewater ocean outfalls row of their activity sheet – i.e. choose which option they prefer and write in first column.

8. Rainwater in the wastewater system (10 minutes)

Spend less time on this section if all group members attended in the last phase as it was already discussed.

Give Handout 8a and b: Rainwater in the wastewater system and options

- What do you think of the options for rainwater in the wastewater system?
- What are the pros and cons of each option?
- Which option do you prefer for your business for rainwater in the wastewater system? Why?

Fill in activity sheet 1

- Participants to fill out rainwater in the wastewater system of their activity sheet – i.e. choose which option they prefer and write in first column.

9. Digital meters (10 minutes)

Give Handout 9a and b: Digital meters and options

- What do you think of the options for digital meters?
- What are the pros and cons of each option?
- Which option do you prefer for your business for digital meters? Why?

Fill in activity sheet 1

- Participants to fill out digital meters row of their activity sheet – i.e. choose which option they prefer and write in first column.

10. Bringing it all together – total bill impact (5 minutes)

- Participants to add up their choices on their activity sheets and see overall bill impact.
- Are they happy with the overall bill impact for their business?
- If not, they now have a chance to change any previous choices on their activity sheet and select new options in the second column, to create a new bill impact they are happy with.
- Discuss reasons for any changes.

11. Lower and higher base case scenarios (10 minutes)

Give Handout 10: Higher or lower bill scenarios

We would now like to hear from you about whether your choices would change if the base bill for your business goes up or down.

Give out activity sheet 2 – lower level bills (decrease by $100)

- Would your choices change if bills go down?
- Ask them to fill out the column for if the business's bills are lower by $100
- Discuss what they have decided to change and reasons for this.

Refer to activity sheet 2 – it also has a column for higher level base case (increase by $100)

- Would your choices change if bills are going to go up?
- Ask them to fill out the second column on activity sheet 2 for if the business's bills are higher by $100.
- Discuss what they have decided to change and reasons

Facilitator to collect all activity sheets.

Any final comments to Sydney Water?
Thank, give incentive and close

Handout 1

Handout 1: Introduction to Sydney Water

Sydney Water is Australia's largest water and wastewater service provider.

We cover an area of 12,700 km² throughout Greater Sydney, from Broken Bay in the North, to the Blue Mountains in the West and down South into the Illawarra.

Every year, we supply over 551 billion litres of drinking water to over 5 million people

We purchase bulk water from dams, filter it, treat it, test it and transport it to homes and businesses.

After it's used, we collect and treat wastewater, and then discharge it in accordance with our environmental licence conditions. Wastewater includes sewage, as well as the water that drains from kitchens, bathrooms and laundries.

We recycle water for use by households and businesses, and to reduce the impact of wastewater discharges on local waterways.

We also provide some stormwater services, however the majority of stormwater services are provided by councils.

We have a large network to move the water around which includes water filtration plants, wastewater treatment and recycling plants, as well as pumping stations and many thousands of kilometres of pipes.

Handout 2a

Handout 2a - Phase 2 Findings: Water prices

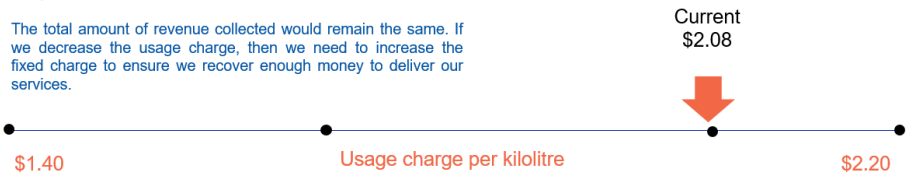
Our water prices currently have both a fixed service charge, and a usage charge applied for every kilolitre of water your business uses. Your fixed charge will depend on the size of the meter for your business. For example, you currently pay $20.19 per quarter as a fixed charge if you have a 20mm meter. If you have an 80mm meter, you would pay $322.70 per quarter as a fixed charge.

In Phase 2, we asked residential and business customers about their preference on the proportions of fixed and usage components of their bill.

The total amount of revenue collected would remain the same. If we decrease the usage charge, then we need to increase the fixed charge to ensure we recover enough money to deliver our services.

We presented four options for the usage charge to businesses, ranging from $1.40 to $2.20 (represented by the black dots).

Amongst residents and small and medium businesses there was support for a usage charge at or above the current level ($2.08). This was thought to set the right incentives for water use, and allow more control over bills.



Sydney Water proposes a usage price of $2.13 per kilolitre for 2020

Handout 2b

Handout 2b - Phase 2 Findings: Wastewater prices

Sydney WATER

Our wastewater prices for businesses currently have a fixed charge, based on the meter size and your discharge factor, and a wastewater usage charge, based on the water you use and your discharge factor.

Most small businesses would not pay a usage charge, as they would not discharge above the allowable volume of 411 litres of wastewater a day (roughly the same as a house).

In our Phase 2 discussion groups, participants voted on four options for the wastewater usage charge, with most supporting increasing it. In our online survey, the majority of small to medium businesses wanted to keep the current wastewater usage charge.

Sydney Water has now done further analysis to better match wastewater pricing with the marginal costs of transporting and treating wastewater. As a result, we are proposing to reduce the usage charge from $1.16/kL to 60c/kL. This will decrease wastewater bills overall for most businesses, and is in line with other wastewater utilities.

Sydney Water proposes to decrease the wastewater usage charge to 60c/kL

This will lead to lower wastewater bills for the majority of business customers from 2020

Handout 3

Handout 3: Total bill impacts for the options

Sydney WATER

Tonight we would like your views on six topics that could affect your business's bill. For each topic we will provide several options for you to choose from.

Just before we start, we thought it would be useful for you to know the likely range of bill impacts that we will be talking about tonight.

If you choose the least expensive option for each topic this would decrease your business's annual bill by around $6.

If you choose the most expensive option, this would have a cost increase of around $82.

1. Water interruptions	-$1.50 to $0.20
2. Water pressure	$0 to $0.20
3. Wastewater overflows	$0 to $65.00
4. Untreated wastewater ocean outfalls	$0 to $2.30
5. Rainwater in the wastewater system	-$4.60 to $0
6. Digital Meters	$0 to $14.30
Total potential annual bill impact:	-$6.10 to +$82.00

Handout 4a

Handout 4a: Water interruptions

Sydney WATER

The first topic is water interruptions. Occasionally we need to turn off your business's water to do emergency repairs without giving you prior notice. When this happens, this is called an unplanned interruption.

During this time your business won't have any water supply. This means that there will be:

- No water coming out of taps, shower
- Can flush the toilet once, but then not again until supply back on.

We have limits for interruptions where we don't give you notice – both for long duration and repeats.

Currently, each year around
2% of our customers
experience a long interruption with no notice

Handout 4b

Handout 4b: Options – Water interruptions

Sydney WATER

Option A No change	Option B Improve	Option C Worsen
Continue what we are doing Fix pipes when they break, replace when have repeat breaks	**New equipment and more notice** Buy and use new equipment to fix breaks without turning off your business's water supply Give more notice for smaller jobs	**Repair pipes more before replacing them** Wait longer before replacing pipes This will lead to more interruptions when we need to fix breaks
This option would mean **no change** in your business's water bill	This option would mean your business would pay an extra **$0.20** each year	This option would mean your business would save **$1.50** each year
20 in 1000 properties would experience a long interruption with no notice	**16 in 1000 properties would experience a long interruption with no notice**	**24 in 1000 properties would experience a long interruption with no notice**

Handout 5a

Handout 5a: Water pressure

Sydney WATER

Water pressure varies at different locations depending on how far the property being supplied is from the reservoir and its elevation in relation to the reservoir.

A 'water pressure failure' happens when pressure drops below our minimum standard. When this happens, your business will still have water supply but there will be a slow flow of water from your taps.

The average pressure is well above minimum standard.

However,
130 customers in the Sydney Water area
experience repeat water pressure failures (tend to be in rural or low density areas)

Handout 5b

Handout 5b: Options – Water pressure

Sydney WATER

Option A No change	**Option B** Fix problem areas
Continue what we are doing Monitor pressure in network and maintain compliance	**Purchase and install pressure booster pumps** Increase pressure for problem areas that experience repeat problems
No change in your business's water bill	Your business pays an extra **$0.20** each year
130 customers experience repeat water pressure failures	**0 customers** experience repeat water pressure failures

Option B would cost each customer an extra $0.20 each year. Most customers would have no change to their water pressure, but this would fix the problem in areas with repeat issues.

We have not presented a worse off option here, as we don't have any practical ways we could reduce spending in this area to achieve a worse off outcome.

Handout 6a

Handout 6a: Wastewater overflows

Sydney WATER

Our next topic is wastewater overflows onto private properties, that are caused by a fault in Sydney Water's system.

Wastewater is the used water that goes down sinks, toilets and drains.

When our wastewater system becomes blocked, for example due to tree roots, wastewater can back up and overflow into your premises from points in your outdoor area or sometimes inside your premises. Fortunately internal overflows are not frequent, and only happen in about 1 in 200 cases.

Overall,
less than 1% of our customers
experience a wastewater overflow each year.

Handout 6b

Handout 6b: Options – Wastewater overflows

Sydney WATER

Option A No change	**Option B** Improve
Continue what we are doing Inspect pipes in problem areas and replace pipes to avoid repeat problems	**Spend MORE time inspecting and replacing wastewater pipes** Increase amount of proactive inspection to find problems before they occur. This is very difficult, due to the very large size of our wastewater network, which is made up of about 24,000 km of wastewater pipes. Under this option, we would increase inspection rates so the whole system is inspected every 10 years.
No change in your business's wastewater bill	Your business pays an extra **$65** each year
5 in 1000 properties experience an overflow on their property each year	**3 in 1000 properties** experience an overflow on their property each year

Handout 7a

Handout 7a: Untreated wastewater ocean outfalls

Sydney WATER

As mentioned, wastewater is the used water that goes down sinks, toilets and drains.

Most of Sydney's wastewater is treated and released deep in the ocean, about 4 kilometres out to sea.

However, there are three outfalls in Sydney, built between 1916 and 1936, that release untreated wastewater at the base of cliff faces under the sea. This is the only wastewater system in New South Wales that puts untreated wastewater into the ocean every day. On average four Olympic swimming pools' worth of untreated wastewater, and 2-3 wheelie bins' worth of plastics and hygiene products are released every day.

We've done a recent study that shows localised impacts to human health and the marine environment, but nearby beaches continue to have good water quality results.

Water near the outfalls poses a high risk of illness transmission. About 2,000 people use the areas for recreation activities like spear fishing, or take part in paddle and swim events that put them in direct contact with pollutants.

Untreated wastewater also has impacts on the local aquatic environment.

Handout 7b

Handout 7b: Options – Untreated wastewater ocean outfalls

Sydney WATER

Option A No change	Option B Improve
Continue to release untreated wastewater at Sydney cliff faces	**Divert untreated wastewater to treatment plant** Build new infrastructure to divert wastewater to a treatment plant so it would be treated before being released through a deep ocean outfall. This will bring the system up the same standard as the rest of Sydney
No change **in your business's bill**	**Your business pays an extra** **$2.30 each year**

Handout 8a

Handout 8a: Rainwater in the wastewater system

Sydney has separate wastewater and stormwater systems. The wastewater system, which is owned by Sydney Water, takes away the used water from your premises. The stormwater system takes away the rainwater that runs off surfaces such as roofs and roads.

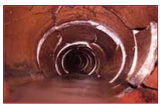
You might remember from the last phase, sometimes the wastewater system overflows because rainwater is getting in through cracks in pipes that belong to customers and through downpipes that have been illegally connected to the wastewater system instead of the stormwater system.

While some customers may be aware of these issues on their property, many may not.

The 'problem'

An increase in wastewater leads to more overflows.

Private plumbing faults/disrepair, including broken or cracked private lines



Ground/rain water infiltration

The source of wastewater overflows is not always close by

Handout 8b

Handout 8b: Options – Rainwater in the wastewater system

Option A No change	Option B Improve	Option C Improve
Continue what we are doing Build bigger pipes, storages, and overflows to take away the excess water	**Inspect private pipes and SW fixes the problem at source in targeted areas** Fix problems at no extra cost to the customer (spread across customer base)	**Inspect private pipes and individual customers pay to fix them** Problems fixed by individual customer $8,500 average cost (one off). Others nil.
No change in your business's bill	You save **$3.00** each year	You save **$4.60** each year

Handout 9a

Handout 9a: Digital Meters

Digital meters can provide more frequent information about your business's water use than traditional meters. They can allow Sydney Water to send you notifications on water use (with your permission) and you can access more detailed data and compare it with similar businesses.

Leak alerts
- Notify if a customer has continual flow at their premises over 24 hours.
- This could be useful for identifying a continually running toilet or a hidden leak.

Bill predictions
- Sydney Water could send customers an estimate of their next water bill.
- This could help businesses to manage their finances by avoiding unexpected changes in quarterly bills

High use notifications
- Send an alert when daily use goes over a specified amount.

Check-in alerts
- About water usage at other properties that have provided permission e.g. when water is used at a vacant premises.

Handout 9b

Handout 9b: Options – Digital meters

Option A No change	Option B Improve
Continue what we are doing Continue to use non-digital meters, which are read by meter readers	**Introduction of digital meters** Install at all new premises and roll out when renewing non-digital meters.
No change in your business's bill	Your business pays an extra **$14.30** each year once all meters are installed

Different from the other items presented tonight, digital meters would be rolled out over 10-15 years. This means the bill impact would go up incrementally each year by about $1. So in year 1, all customers would pay about a dollar extra, in year 2, about $2, until the end of the rollout when all customers would be paying $14.30 a year.

Handout 10

Handout 10: Higher or lower bill scenarios

Bills can go up and down depending on a range of factors, many of which Sydney Water does not have control over (e.g. interest rates). Similar to mortgage repayments, your business's Sydney Water bill is influenced by the interest rate at the time our prices are set. Depending on the movement in interest rates and other factors, the average bill may increase or decrease by the time Sydney Water prices are set in mid-2020.

Therefore, for the last set of questions we would like you to consider your choices in the scenario of a lower or higher bill. We would like to hear whether your choices would change if the base bill goes up or down for your business by $100.

That is, are there any options you have supported that would change if your baseline bill went up; or are there any options you would like to see added if your baseline bill went down?

L Recruitment screener for small-medium business groups

SME group screener

Specification:
2 full groups of Small and Medium Business water and waste water decision makers. By water decision makers we mean those who would have a role in interacting with SW either if there was a water interruption or wastewater overflow or by paying water bills (8 per group). 1.5 hours duration.
Please note that previous SME attendees to the SW groups in March and August can be invited back but must qualify at Q4.

Parramatta CGR – 7.30pm Monday 19th November - Level 4 Perth House 85 George St Parramatta (Liz)
CBD – CGR – 7.30pm Monday 3rd December - Level 11, 60 York Street, Sydney (Louisa)

1. What is the postcode of where your business is located? **CHECK IN SW AREA. IF NOT TERMINATE.**

_____

2. How many employees do you have in your business, by employees we mean full time equivalents other than the proprietor? **Please recruit a mix of sizes**

No employees/sole trader	1	**GO TO Q2b**
1 - 4 employees	2	
5 - 10	3	
11 - 19	4	
20 - 199	5	
200+	6	**TERMINATE**

2b.**IF NO EMPLOYEES/SOLE TRADER**: Do you operate your business out of your home/home office?

Yes	1	**TERMINATE**
No	2	

3. Are you a decision maker for your organisation regarding water supply or wastewater services?

Yes	1	
No	2	**TERMINATE**

4. Which of the following best describes the water and wastewater bills you receive for your business? **TERMINATE IF CODE 6 (ALL SMEs MUST PAY OR CONTRIBUTE TO BILLS)**

I receive bills from Sydney Water	1
I receive bills from Sydney Water and from my body corporate	2
My landlord receives bills from Sydney Water and charges the full amount to me as a specific charge separate from rent	3
My landlord receives bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent	4
My landlord charges me a specific amount for water and wastewater, but I don't know how that amount relates to the Sydney Water bill	5
I do not directly pay any amount for water and wastewater	6 - TERMINATE

5. Do you, or any immediate members of your family, work for Sydney Water, any other water or wastewater utility company, IPART (the Independent Pricing and Regulatory Tribunal), a water quality related role with NSW Health or NSW Environment Protection Authority?

Yes	1	**TERMINATE**
No	2	

6. What industry does your business operate within?

PLEASE ENSURE A GOOD MIX OF INDUSTRY TYPES

Accommodation, cafes and restaurants	1
Agriculture, forestry, fishing and hunting	2
Communication services	3
Construction	4
Cultural and recreational services	5
Education	6
Electricity or gas supply	
Finance and insurance	7
Government administration and defence	8
Health and community services	9
Manufacturing	10
Mining	11
Personal services	12
Property and business services	13
Retail trade	14
Transport and storage	15
Wholesale trade	16
Other (Specify):	17

7. Are you?

Male	1
Female	2

8. What is your position or title within your organisation?

Owner / Proprietor	1
Senior Management	2
Other employee	3

9. How many years has your business been operating?

Less than 1 year	1
1-2 years	2
2-5 years	3
6-10 years	4
More than 10 years	5

10. Does your business own or rent/lease its business premises?

Own	1
Rent/lease	2
Other	3

Also, please can you either bring a recent bill or have a look at the amount you are paying per quarter as we will be asking you to estimate your annual bill at the group.

- Incentive of $125 for taking part, and tea, coffee and light refreshments will be provided.
- Participants do not need to know anything at all about water or wastewater service provision to take part.

Thank you for your time.

M Discussion guide and handouts for LOTE & Financial Hardship groups

Discussion Guide: *Sydney Water 1.5 hours – Phase 3 (November)*

Introduction (2 minutes)

Introduce yourself; welcome; explain the project and process:

- Work for an independent research company
- Doing this project for Sydney Water (water and wastewater service provider)
- The purpose of the group discussion is to find out your opinions on pricing issues.
- As they are a monopoly provider, they are regulated by an independent body who monitors their performance, recommends minimum standards and set their prices.
- Your views tonight are going to help with some of the decisions they need to make to develop their proposal to the regulator.
- Our role is to report back to Sydney Water on your feedback however your responses are confidential and anonymous. We report in an overall basis only and do not mention specific names, etc.
- Explain that this is the third phase of a three phased engagement program planned for this year, and that this phase is focussing on finding out which investment options customers prefer, particularly in the context of the full bill impact of these options.

Check ok to record the discussion – only for our purposes.

1. Warm up (3 mins)

Ask them to introduce themselves and a little about their household make up, e.g. how many people live there, apartment or house etc.

4. Phase 2 findings (10 minutes)

Explain that this first handout provides a bit of background about SW and what they do (most will probably have seen this before – so just a refresher).

Give handout 1: Introduction to Sydney Water

Sydney Water bills are made up of fixed components and a water usage component. In forums, surveys and groups like this that were held in August this year, people told us

what proportion of the charges they would like to be fixed and variable for their water supply.

Give Handout 2a: Fixed v usage findings from phase 2 and what SW plan to do

- Does this align with what you remember (for those who took part in phase 2)/what you think (for those who did not take part in phase 2)?
- Overall, do you support Sydney Water's proposal for water prices, with a usage charge of $2.13 per kilolitre? *Facilitator to get show of hands – record number. If no, why not?*

People also told us that they did not want a usage charge introduced for wastewater.

Give Handout 2b: Wastewater tariffs findings from phase 2 and what SW plan to do

- Does this align with what you remember/what you think?
- Overall, do you support Sydney Water's proposal for residential wastewater prices, to keep these as a fixed charge only? *Facilitator to get show of hands – record number. If no, why not?*

5. Introduction to the activity (5 minutes)

EXPLAIN TO GROUP MEMBERS:
We want your views on six topics that could affect your bill.
In our Phase 2 surveys we asked about willingness to pay for a range of changes, on each of these as individual topics. This was based on a range of theoretical changes, not costed options, and only focused on one topic at a time. We have now developed some costed options. Tonight is about bringing it all together. Sydney Water will use your feedback to help make decisions about its plans for 2020-2025.

For each topic tonight there will be two or three investment options including the current option which results in no bill change. There will also be an option that would improve services but result in a cost to customers. Where applicable, there will also be an option that would worsen services and may result in a cost reduction. This is not shown where there is not a viable option.

You will be given an activity sheet that I will ask you to fill in throughout the night, as we talk about each topic, to show which option you prefer. At the end, you will have a chance to revisit your choices, add up the bill impact, and see if you want to change any of your choices.

Give Handout 3: Total bill impacts for the options

4. Water interruptions (10 minutes)

So the first topic we are going to discuss tonight is water interruptions.

Give Handout 4a and b: Water interruptions and options

- What do you think of the options for water interruptions?
- What are the pros and cons of each option?
- Which option do you prefer for water interruptions? Why?

Give out activity sheet 1

- Participants to fill out water interruptions row of their activity sheet – i.e. choose which option they prefer and write in first column.

5 Water pressure (5 minutes)

Give Handout 5a and b: Water pressure and options

- What do you think of the options for water pressure?
- What are the pros and cons of each option?
- Which option do you prefer for water pressure? Why?

Fill in activity sheet 1

- Participants to fill out water pressure row of their activity sheet – i.e. choose which option they prefer and write in first column.

6. Wastewater overflows (10 minutes)

Give Handout 6a and b: Wastewater overflows and options

- What do you think of the options for wastewater overflows?
- What are the pros and cons of each option?
- Which option do you prefer for wastewater overflows? Why?

Fill in activity sheet 1

- Participants to fill out wastewater overflows row of their activity sheet – i.e. choose which option they prefer and write in first column.

7. Untreated wastewater ocean outfalls (10 minutes)

Give Handout 7a and b: Untreated wastewater ocean outfalls and options

- What do you think of the options for untreated wastewater ocean outfalls?
- What are the pros and cons of each option?
- Which option do you prefer for untreated wastewater ocean outfalls? Why?

Fill in activity sheet 1

- Participants to fill out untreated wastewater ocean outfalls row of their activity sheet – i.e. choose which option they prefer and write in first column.

8. Rainwater in the wastewater system (10 minutes)

Spend less time on this section if all group members attended in the last phase as it was already discussed.

Give Handout 8a and b: Rainwater in the wastewater system and options

- What do you think of the options for rainwater in the wastewater system?
- What are the pros and cons of each option?
- Which option do you prefer for rainwater in the wastewater system? Why?

Fill in activity sheet 1

- Participants to fill out rainwater in the wastewater system of their activity sheet – i.e. choose which option they prefer and write in first column.

9. Digital meters (10 minutes)

Give Handout 9a and b: Digital meters and options

- What do you think of the options for digital meters?
- What are the pros and cons of each option?
- Which option do you prefer for digital meters? Why?

Fill in activity sheet 1

- Participants to fill out digital meters row of their activity sheet – i.e. choose which option they prefer and write in first column.

10. Bringing it all together – total bill impact (5 minutes)

- Participants to add up their choices on their activity sheets and see overall bill impact.
- Are they happy with the overall bill impact?
- If not, they now have a chance to change any previous choices on their activity sheet and select new options in the second column, to create a new bill impact they are happy with.
- Discuss reasons for any changes.

11. Lower and higher base case scenarios (10 minutes)

Give Handout 10: Higher or lower bill scenarios

We would now like to hear from you about whether your choices would change if the base bill goes up or down.

Give out activity sheet 2 – lower level bills (decrease by $100)

- Would your choices change if bills go down?
- Ask them to fill out the column for if the bills are lower by $100
- Discuss what they have decided to change and reasons for this.

Refer to activity sheet 2 – it also has a column for higher level base case (increase by $100)

- Would your choices change if bills are going to go up?
- Ask them to fill out the second column on activity sheet 2 for if the bills are higher by $100.
- Discuss what they have decided to change and reasons

Facilitator to collect all activity sheets as these will have to be provided back to Woolcott Research.

Any final comments to Sydney Water?

Thank, give incentive and close

Handout 1

Handout 1: Introduction to Sydney Water

Sydney Water is Australia's largest water and wastewater service provider.

We cover an area of 12,700 km² throughout Greater Sydney, from Broken Bay in the North, to the Blue Mountains in the West and down South into the Illawarra.

Every year, we supply over 551 billion litres of drinking water to over 5 million people

We purchase bulk water from dams, filter it, treat it, test it and transport it to homes and businesses.

After it's used, we collect and treat wastewater, and then discharge it in accordance with our environmental licence conditions. Wastewater includes sewage, as well as the water that drains from kitchens, bathrooms and laundries.

We recycle water for use by households and businesses, and to reduce the impact of wastewater discharges on local waterways.

We also provide some stormwater services, however the majority of stormwater services are provided by councils.

We have a large network to move the water around which include water filtration plants, wastewater treatment and recycling plants, as well as pumping stations and many thousands of kilometres of pipes

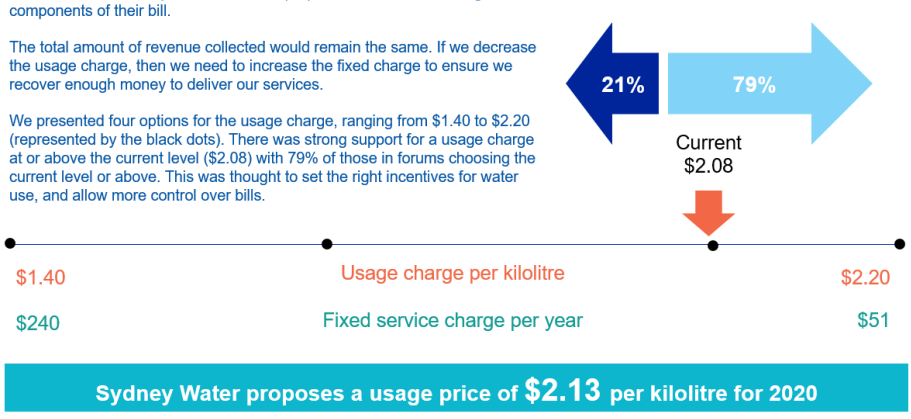
Handout 2a

Handout 2a - Phase 2 Findings: Water prices

Our water prices currently have both a fixed service charge, and a usage charge applied for every kilolitre of water you use. In Phase 2, we asked customers about their preference on the proportions of fixed and usage components of their bill.

The total amount of revenue collected would remain the same. If we decrease the usage charge, then we need to increase the fixed charge to ensure we recover enough money to deliver our services.

We presented four options for the usage charge, ranging from $1.40 to $2.20 (represented by the black dots). There was strong support for a usage charge at or above the current level ($2.08) with 79% of those in forums choosing the current level or above. This was thought to set the right incentives for water use, and allow more control over bills.



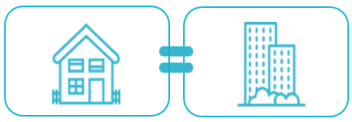
Sydney Water proposes a usage price of $2.13 per kilolitre for 2020

Handout 2b

Handout 2b - Phase 2 Findings: Wastewater prices

Sydney WATER

For wastewater charges, customers preferred to keep the current price structure for residential charges - a single fixed charge only, with the same charge for houses and apartments.



We also presented an option with a usage component. This was discussed with interest and had general support, however many disagreed with the method that would need to be used - a set amount based on a percentage of your water use, as wastewater meters are too expensive and impractical to install. Forum participants were concerned about the accuracy, complexity and impact to bills of this method.

Sydney Water proposes to retain the same fixed charge for all residential customers from 2020

Handout 3

Handout 3: Total bill impacts for the options

Sydney WATER

Tonight we would like your views on six topics that could affect your bill. For each topic we will provide several options for you to choose from.

Just before we start, we thought it would be useful for you to know the likely range of bill impacts that we will be talking about tonight.

If you choose the least expensive option for each topic this would decrease your annual bill by around $6.

If you choose the most expensive option, this would have a cost increase of around $82.

1. Water interruptions	-$1.50 to $0.20
2. Water pressure	$0 to $0.20
3. Wastewater overflows	$0 to $65.00
4. Untreated wastewater ocean outfalls	$0 to $2.30
5. Rainwater in the wastewater system	-$4.60 to $0
6. Digital Meters	$0 to $14.30
Total potential annual bill impact:	-$6.10 to +$82.00

Handout 4a

Handout 4a: Water interruptions

Sydney WATER

The first topic is water interruptions. Occasionally we need turn off your water to do emergency repairs without giving you prior notice. When this happens, this is called an unplanned interruption.

During this time you won't have any water supply. This means that there will be:

- No water coming out of taps, shower
- Can flush the toilet once, but then not again until supply back on.

We have limits for interruptions where we don't give you notice – both for long duration and repeats.

Currently, each year around
20 in 1000 properties
experience a long interruption with no notice

This is less than 2% of our customers

Handout 4b

Handout 4b: Options – Water interruptions

Sydney WATER

Option A No change	**Option B** Improve	**Option C** Worsen
Continue what we are doing Fix pipes when they break, replace when have repeat breaks	**New equipment and more notice** Buy and use new equipment to fix breaks without turning off your water supply Give more notice for smaller jobs	**Repair pipes more before replacing them** Wait longer before replacing pipes This will lead to more interruptions when we need to fix breaks
This option would mean **no change** in your water bill	This option would mean you would pay an extra **$0.20** each year	This option would mean you save **$1.50** each year
20 in 1000 properties would experience a long interruption with no notice	**16 in 1000 properties would experience a long interruption with no notice**	**24 in 1000 properties would experience a long interruption with no notice**

Handout 5a

Handout 5a: Water pressure

Sydney WATER

Water pressure varies at different locations depending on how far you are from the reservoir and your elevation in relation to the reservoir.

A 'water pressure failure' happens when pressure drops below our minimum standard. When this happens, you will still have water supply but there will be a slow flow of water from your taps.

The average pressure is well above minimum standard.

However,
130 customers in the Sydney Water area
experience repeat water pressure failures (tend to be in rural or low density areas)

Handout 5b

Handout 5b: Options – Water pressure

Sydney WATER

Option A No change	**Option B** Fix problem areas
Continue what we are doing Monitor pressure in network and maintain compliance	**Purchase and install pressure booster pumps** Increase pressure for problem areas that experience repeat problems
No change in your water bill	You pay an extra **$0.20** each year
130 customers experience repeat water pressure failures	**0 customers** experience repeat water pressure failures

Option B would cost each customer an extra $0.20 each year, most people would have no change to their water pressure, but this would fix the problem in areas with repeat issues.

We have not presented a worse off option here, as we don't have any practical ways we could reduce spending in this area to achieve a worse off outcome.

Handout 6a

Handout 6a: Wastewater overflows

Sydney WATER

Our next topic is wastewater overflows onto private properties, that are caused by a fault in Sydney Water's system.

Wastewater is the used water that goes down sinks, toilets and drains.

When our wastewater system becomes blocked, for example due to tree roots, wastewater can back up and overflow into your property from points in your backyard or sometimes inside your home. Fortunately internal overflows are not frequent, and only happen in about 1 in 200 cases.

Overall, less than 1 percent of our customers experience a wastewater overflow each year.

Handout 6b

Handout 6b: Options – Wastewater overflows

Sydney WATER

Option A No change	Option B Improve
Continue what we are doing Inspect pipes in problem areas and replace pipes to avoid repeat problems	**Spend MORE time inspecting and replacing wastewater pipes** Increase amount of proactive inspection to find problems before they occur. This is very difficult, due to the very large size of our wastewater network, which is made up of about 24,000 km of wastewater pipes. Under this option, we would increase inspection rates so the whole system is inspected every 10 years.
No change in your wastewater bill	You pay an extra **$65** each year
5 in 1000 properties experience an overflow on their property each year	**3 in 1000 properties** experience an overflow on their property each year

Handout 7a

Handout 7a: Untreated wastewater ocean outfalls

Sydney WATER

As mentioned, wastewater is the used water that goes down sinks, toilets and drains.

Most of Sydney's wastewater is treated and released deep in the ocean, about 4 kilometres out to sea.

However, there are three outfalls in Sydney, built between 1916 and 1936, that release untreated wastewater at the base of cliff faces under the sea. This is the only wastewater system in New South Wales that puts untreated wastewater into the ocean every day. On average four Olympic swimming pools' worth of untreated wastewater, and 2-3 wheelie bins' worth of plastics and hygiene products are released every day.

We've done a recent study that shows localised impacts to human health and the marine environment, but nearby beaches continue to have good water quality results.

Water near the outfalls poses a high risk of illness transmission. About 2,000 people use the areas for recreation activities like spear fishing, or take part in paddle and swim events that put them in direct contact with pollutants.

Untreated wastewater also has impacts on the local aquatic environment.

Handout 7b

Handout 7b: Options – Untreated wastewater ocean outfalls

Sydney WATER

Option A No change	**Option B** Improve
Continue to release untreated wastewater at Sydney cliff faces	**Divert untreated wastewater to treatment plant** Build new infrastructure to divert wastewater to a treatment plant so it would be treated before being released through a deep ocean outfall. This will bring the system up the same standard as the rest of Sydney
No change in your bill	You pay an extra **$2.30** each year

Handout 8a

Handout 8a: Rainwater in the wastewater system

Sydney WATER

Sydney has separate wastewater and stormwater systems. The wastewater system, which is owned by Sydney Water, takes away the used water from your premises. The stormwater system takes away the rainwater that runs off surfaces such as roofs and roads.

You might remember from the last phase, sometimes the wastewater system overflows because rainwater is getting in through cracks in pipes that belong to customers and through downpipes that have been illegally connected to the wastewater system instead of the stormwater system.

While some customers may be aware of these issues on their property, many may not.

The 'problem'

An increase in wastewater leads to more overflows.

Private plumbing faults/disrepair, including broken or cracked private lines

Ground/rain water infiltration

The source of wastewater overflows is not always close by

Handout 8b

Handout 8b: Options – Rainwater in the wastewater system

Sydney WATER

Option A No change	Option B Improve	Option C Improve
Continue what we are doing Build bigger pipes, storages, and overflows	**Inspect private pipes and SW fixes the problem in targeted areas** Fix problems at no extra cost to the customer (spread across customer base)	**Inspect private pipes and individual customers pay to fix them** Problems fixed by individual customer $8,500 average cost (one off). Others nil.
No change in your bill	You save **$3.00** each year	You save **$4.60** each year

Handout 9a

Handout 9a: Digital Meters

Sydney WATER

Digital meters can provide more frequent information about your water use than traditional meters. They can allow Sydney Water to send you notifications on water use (with your permission) and you can access more detailed data and compare it with similar households.

Leak alerts
- Notify if a customer has continual flow at their property over 24 hours.
- This could be useful for identifying a continually running toilet or a hidden leak.

Bill predictions
- Sydney Water could send customers an estimate of their next water bill.
- This could help customers manage their finances by avoiding unexpected changes in quarterly bills

High use notifications
- Send an alert when daily use goes over a specified amount e.g catch watering systems that have been left on, or hoses being used to top up swimming pools.

Check-in alerts
- About water usage at other properties that have provided permission e.g. when water is used at a vacant property or a holiday rental, or when water usage falls to zero at an elderly relative's house.

Handout 9b

Handout 9b: Options – Digital meters

Sydney WATER

Option A No change	Option B Improve
Continue what we are doing Continue to use non-digital meters, which are read by meter readers	**Introduction of digital meters** Install at all new properties and roll out when renewing non-digital meters.
No change **in your bill**	You pay an extra **$14.30** each year once all meters are installed

Different from the other items presented tonight, digital meters would be rolled out over 15 years. This means the bill impact would go up incrementally each year by about $1. So in year 1, all customers will pay about a dollar extra, in year 2, about $2, until the end of the rollout when all customers will be paying $14.30 a year.

Handout 10

Handout 10: Higher or lower bill scenarios

Bills can go up and down depending on a range of factors, many of which Sydney Water does not have control over (e.g. interest rates). Similar to mortgage repayments, your Sydney Water bill is influenced by the interest rate at the time our prices are set. Depending on the movement in interest rates and other factors, the average bill may increase or decrease by the time Sydney Water prices are set in mid-2020.

We have presented our best estimate of the average bill in 2020 of $1,170. We believe the most likely scenario is that bills will not change. If they do change, we think the maximum change would be no more than $100, up or down.

For the last set of questions we would like you to consider your choices in the scenario of a lower or higher bill. We would like to hear whether your choices would change if the base bill goes up or down.

That is, are there any options you have supported that would change if your baseline bill went up; or are there any options you would like to see added if your baseline bill went down?

N Recruitment screener for Financial Hardship groups

Financial hardship group screener

Specification:
2 full groups of those in financial hardship (8 per group). Up to I.5 hours per group. Please note that previous attendees to the SW groups in March and August can be invited back but must qualify at Q2.

Parramatta CGR – 6pm Monday 19th November - Level 4 Perth House 85 George St Parramatta
CBD – CGR – 6pm Monday 3rd December - Level 11, 60 York Street, Sydney

Information: These groups are being held as the final phase of the engagement program for Sydney Water's Operating Licence and Pricing Submissions. The purpose of the group is to obtain your feedback on investment options, in other words whether you would be willing to pay more or would rather pay less for options in relation to specific services. This is building on from the last phase of research.

Screener:
Note that these are all the same questions as phase 2:

1. What is your postcode? **CHECK IN SW AREA. IF NOT TERMINATE.**

_____

2. Which of the following best describes the water and wastewater bills you receive for the residence you live in? **TERMINATE IF CODE 6 (ALL MUST PAY OR CONTRIBUTE TO BILLS)**

I receive bills from Sydney Water	1
I receive bills from Sydney Water and from my body corporate	2
My landlord receives bills from Sydney Water and charges the full amount to me as a specific charge separate from rent	3
My landlord receives bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent	4
My landlord charges me a specific amount for water and wastewater, but I don't know how that amount relates to the Sydney Water bill	5
I do not directly pay any amount for water and wastewater	6 - TERMINATE

3. Do you currently hold a concession card/low income healthcare card?
   - Yes 1
   - No 2 - TERMINATE
   - Refused DNRO 3 - TERMINATE

4. In the last 12 months, have you had any difficulty paying your utility bills? (e.g. requested an extension of time for payment)
   - Yes 1
   - No 2 - TERMINATE

5. Do you, or any immediate members of your family, work for Sydney Water, any other water or wastewater utility company, IPART (the Independent Pricing and Regulatory Tribunal), a water quality related role with NSW Health or NSW Environment Protection Authority?
   - Yes 1 – TERMINATE
   - No 2

6. Please select your gender: **(please recruit 50:50 split of males and females)**
   - Male 1
   - Female 2

7. Please indicate which age group you fall into? **(please aim for 2 in each age category)**
   - Under 18 years 1 TERMINATE
   - 18-29 years 2
   - 30-44 years 3
   - 45-64 years 4
   - 65+ years 5

8. Is the place you live in: **(please aim for over half in the group who own outright or with a mortgage)**
   - Owned outright or with a mortgage 1
   - Being rented or occupied rent-free 2
   - Other (please specify) 3

9. Do you speak a language other than English at home or with family?
   - No, English only 1 SKIP TO Q7
   - Yes 2 ASK Q6

10. What is the main language spoken at home or with family other than English?
    - Arabic 1
    - Australian Indigenous Languages 2
    - Cantonese 3
    - Croatian 4
    - Dutch 5
    - French 6
    - German 7
    - Greek 8

Hindi	9
Indonesian	10
Italian	11
Japanese	12
Korean	13
Lebanese	14
Macedonian	15
Mandarin	16
Polish	17
Punjabi	18
Serbian	19
Spanish	20
Tagalog (Filipino)	21
Turkish	22
Vietnamese	23
Other (please specify)	24
Prefer not to say	25

11. Are you of Aboriginal or Torres Strait Islander origin?

No	1
Yes	2
Prefer not to say	3

12. What is your approximate annual household income before tax?

Less than $41,600	1
Between $41,600 and $78,000	2
Between $78,000 and $104,000	3
Between $104,000 and $156,000	4
More than $156,000	5
Prefer not to say	6

13. Are you a member of any special interest groups or associations related to water?

Yes (please specify)	1
No	2

14. Do you consider yourself to have a disability?

Yes	1
No	2

If yes, what type of disability to you have?

_____

Also, please can you either bring a recent bill or have a look at the amount you are paying per quarter as we will be asking you to estimate your annual bill at the group.

- Incentive of $80 for taking part, and tea, coffee and light refreshments will be provided.

- Participants do not need to know anything at all about water or wastewater service provision to take part.

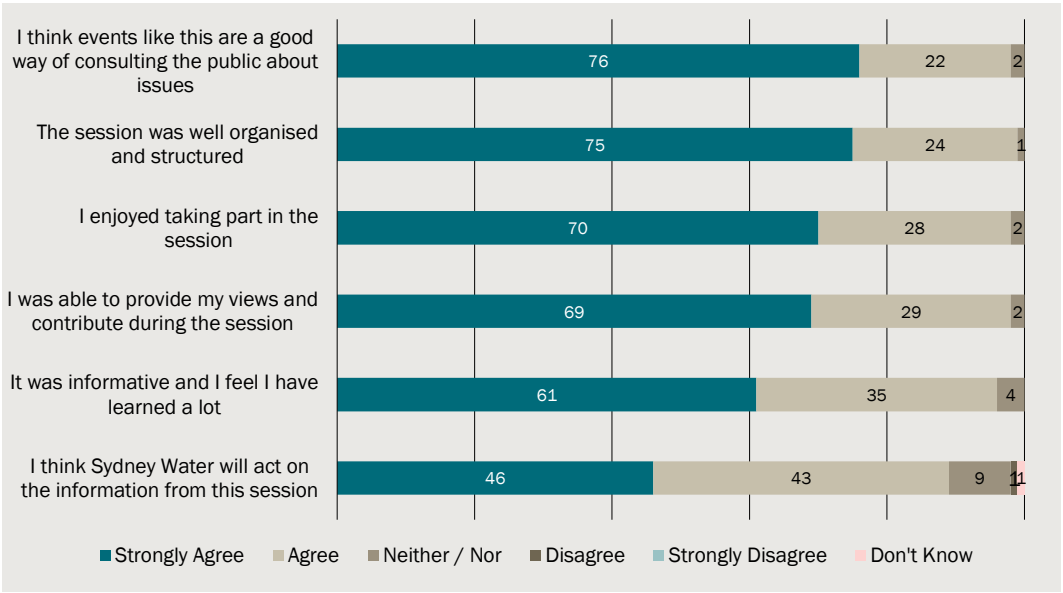
Thank you for your time.

O Forum evaluation

Similar to Phases 1 and 2, at the end of the forums participants were given a questionnaire to enable them to provide feedback on the event. The questionnaire included a list of statements and they were asked the extent to which they agreed with each one.

The evaluation by participants was again very positive, with 98 per cent agreeing that events like this are a good way of consulting the public about issues (76 per cent strongly agreeing). Some 99 per cent believed that the session was well organised and structured and 98 per cent agreed that they enjoyed taking part in the session. Some 98 per cent stated that they were able to provide their views and contribute during the session and 96% felt it was informative and that they learned a lot. The vast majority also believed that Sydney Water would act on the information from the session (89 per cent).

0.1 Forum evaluation by participants



Q. Based on your experience today, please indicate whether you Strongly Agree, Agree, Disagree, Strongly Disagree or Neither Agree or Disagree with each of the following statements...

Base All respondents n=529

P Online survey questionnaire

Project	Sydney Water CIPA
Engagement	Price submission 2020
Sample	Citizens n=1000 and businesses n=250

PLEASE SCREEN OUT DEVICES OTHER THAN DESKTOP

Welcome…

Thank you for participating in this survey, which is being run by Pureprofile and the Centre for International Economics on behalf of Sydney Water.

As part of Sydney Water's focus on putting customers at the heart of everything we do, we are asking our customers to help inform our plan for 2020-2025. This plan will affect your bill and the services you get.

This questionnaire will take around 20 minutes to complete.

We wish to reassure you that this is genuine market research and, as always, your individual survey responses will remain confidential and anonymous at all times.

In the unlikely event of any technical difficulties please click on the technical support e-mail link.

For other enquiries, please contact Sydney Water on 1800 627 687.

Please keep in mind…

Do not use your Back or Forward browser buttons while you are taking this survey. Once you answer a question, you will not be able to go back and change your answer.

Before we go through to the main study we would like to ask you a number of questions to make sure we are interviewing a good cross section of people.

1. Are you:

   Please select one.

   a. A business owner or sole trader with a commercial premises **GO TO BUSINESS VERSION**

b. Responsible for managing business operations at a commercial premises **GO TO BUSINESS VERSION**

c. None of the above **GO TO CITIZEN VERSION**

CITIZEN ONLY

Please fill out this questionnaire on behalf of your household.

BUSINESS ONLY

Please fill out this questionnaire on behalf of your business.

CITIZEN ONLY

2. Do you or anyone in your household work for any of the following industries/organisations?

Water supply or wastewater services

Market research

IPART (Independent Pricing and Regulatory Tribunal)

NSW Health in a role related to water quality regulation

NSW Environment Protection Authority

a. Yes **TERMINATE**

b. No

BUSINESS ONLY

3. Does your business operate in the water and wastewater service or market research industries?

a. Yes **TERMINATE**

b. No

TERMINATE PAGE

Thank you for your patience in answering these questions. Unfortunately, we do not need you to participate in our research this time, but we sincerely appreciate your time and assistance today.

To keep up to date with opportunities to be involved in ongoing research and consultation, visit https://www.sydneywatertalk.com.au/

CITIZEN ONLY

4. How does your household get water and wastewater bills?

   a. I get bills from Sydney Water
   b. I get bills from Sydney Water and from my body corporate
   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent
   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent
   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill
   f. I don't pay a separate amount for water and wastewater **TERMINATE**

BUSINESS ONLY

5. How does your business get water and wastewater bills?

   a. I get bills from Sydney Water
   b. I get bills from Sydney Water and from my body corporate
   c. My landlord/managing agent gets bills from Sydney Water and charges the full amount to me as a specific charge separate from rent
   d. My landlord/managing agent gets bills from Sydney Water and charges part of the bill to me as a specific charge separate from rent
   e. My landlord/managing agent charges me an amount for water and wastewater, separate from rent, but I don't know how that amount relates to the Sydney Water bill
   f. I don't pay a separate amount for water and wastewater **TERMINATE**

CITIZEN ONLY

Please give a rough estimate of the amount you pay for water and wastewater services each quarter.

If you receive bills from Sydney Water:

- a small household, with no garden, using 25 kL each quarter, would pay around $230
- a typical apartment, using 45 kL each quarter, would pay around $270
- a typical house, using 55kL a quarter, would pay around $290
- a large household or a household with a garden, using 90 kL each quarter, would pay around $360

6. The amount I pay for water and wastewater services each quarter is about:

_____

BUSINESS ONLY

Please give a rough estimate of the amount your business pays for water and wastewater services each quarter.

If you don't know how much you pay, the following table provides a guide to the bills paid by different types of businesses (excluding any trade waste charges).

Customer type		Water usage	**Average water and wastewater bill**
		kL/quarter	**$/quarter**
Industrial	Low e.g. tyre dealer	50	**280**
	Medium e.g. small food manufacturer, small brewery	1 450	**4 860**
	High e.g. Paper mill, large brewery, textile producer, commercial laundry	6 500	**21 530**
Industrial strata unit	Low e.g. equipment hire	19	**220**
	Medium e.g furniture manufacturer, mechanic	23	**300**
	High e.g. micro brewery	8 000	**24 710**
Commercial	Low e.g. hairdresser, fish & chips shop, petrol station	78	**370**
	Medium e.g. small shopping centre, plaza, small club, pubs, market place, low rise office building, schools	1 675	**5 530**
	High e.g. High-rise office building, large shopping centres, hotels, club, universities	5 250	**17 800**
Commercial strata unit	Low e.g. newsagent, café, convenience store	33	**250**
	Medium e.g. fast food restaurants	45	**340**
	High e.g. large restaurant, function centre	525	**2100**

7. The amount my business pays for water and wastewater services each quarter is about:

_____

CITIZEN ONLY

8. What is the postcode of your home address? TERMINATE IF OUT OF AREA. CHECK QUOTAS. POSTCODES 2017, 2133, 2132, 2194, 2192, 2136, 2191, 2195, 2190, 2043, 2209, 2130, 2160, 2208, 2015, 2131, 2134, 2141, 2044, 2140 ARE IN AREA FOR STORMWATER. IF IN AREA FOR STORMWATER, GO TO STORMWATER VERSION.

_____

BUSINESS ONLY

9. What is the postcode of your business address? TERMINATE IF OUT OF AREA. CHECK QUOTAS. POSTCODES 2017, 2133, 2132, 2194, 2192, 2136, 2191, 2195, 2190, 2043, 2209, 2130, 2160, 2208, 2015, 2131, 2134, 2141, 2044, 2140 ARE IN AREA FOR STORMWATER. IF IN AREA FOR STORMWATER, GO TO STORMWATER VERSION.

_____

CITIZEN ONLY

10. Are you… CHECK QUOTAS

    a. Male
    b. Female
    c. Non-gender-specific
    d. Prefer not to say

CITIZEN ONLY

11. What is your age? CHECK QUOTAS

    a. Less than 18 years TERMINATE
    b. 18-29 years
    c. 30-39 years
    d. 40-49 years
    e. 50-59 years

f. 60-69 years

g. 70-79 years

h. 80 years or more

BUSINESS ONLY

12. How many employees do you have in your business (full time equivalents other than the proprietor)? **CHECK QUOTAS**

a. Non-employing / sole trader

b. 1-4 employees

c. 5-19 employees

d. 20-199 employees

e. 200 employees or more **TERMINATE**

BUSINESS ONLY

13. In which industry does your business mainly operate? **CHECK QUOTAS**

a. Accommodation and Food Services

b. Administrative and Support Services

c. Agriculture, Forestry and Fishing

d. Arts and Recreation Services

e. Construction

f. Currently Unknown

g. Education and Training

h. Electricity, Gas, Water and Waste Services

i. Financial and Insurance Services

j. Health Care and Social Assistance

k. Information Media and Telecommunications

l. Manufacturing

m. Mining

n. Other Services

o. Professional, Scientific and Technical Services

p. Public Administration and Safety

q. Rental, Hiring and Real Estate Services

r. Retail Trade

s. Transport, Postal and Warehousing

t. Wholesale Trade

This questionnaire is about Sydney Water's plan for 2020-2025.

It has three parts

- Background information on the parts of the plan we want your input on
- Questions about what you want in the plan
- Questions about you

We want to hear from you about these parts of our plan:

- Water interruptions
- Wastewater overflows
- Inspecting your pipes
- Digital meters
- Untreated wastewater ocean outfalls
- Chronic low water pressure
- Waterway health **STORMWATER ONLY**

We will provide you with some information about each of these parts and ask for your views.

Then, we will ask you to create your preferred package of options, taking account of the impact on your bill.

Water supply interruptions

Sometimes, Sydney Water will need to turn off your mains water supply to fix water pipes in your area.

While the water supply is turned off, you won't be able to get water from the taps on your property. For example, you will not be able to:

- pour a glass of drinking water;
- flush the toilet (after it's been flushed once);
- rinse or wash dishes or clothes; or
- have a shower.

Sometimes, Sydney Water will give you warning about a water interruption by sending you a letter beforehand.

On other occasions, the work will be urgent and Sydney Water will not be able to warn you about an interruption.

Water supply interruptions – options

There are three options.

The chance of interruptions happening to you under each option is described as the number of properties in 1000 that would experience an interruption each year. On average, there are around 3000 properties in a Sydney suburb, so 1000 properties is around one third of a suburb.

	Option A No change	**Option B** Improve	**Option C** Worsen
	Continue what we are doing	**New technology and more notice**	**Repair pipes more before replacing them**
	No change in your water bill	You pay an extra **$0.20** each year	You save **$1.50** each year
Interruptions without notice (5+ hours)	**20** in 1000 properties	**16** in 1000 properties	**24** in 1000 properties
Interruptions without notice (less than 5 hours)	**100** in 1000 properties	**99** in 1000 properties	**140** in 1000 properties
Interruptions with notice	**20** in 1000 properties	**21** in 1000 properties	**10** in 1000 properties

At the moment, we are thinking of including Option B in the plan, based on what customers have told us about how much they are willing to pay to avoid water interruptions.

14. Which option would you prefer? (You will be able to change your answer when choosing your preferred overall package at the end of the survey)
    a. Option A – no change
    b. Option B – improve (you pay $0.20)
    c. Option C – worsen (you save $1.50)
    d. No firm preference

Wastewater overflows

Wastewater is the used water that goes down sinks, toilets and drains. When the wastewater system becomes blocked, for example due to tree roots, wastewater can overflow from the manholes that are used to access the sewerage pipes or from a grate in your yard.

In rare cases (about 1 in 200), wastewater may overflow within a building, for example from the shower drain.

Wastewater is mostly water, but it can contain viruses, bacteria and other organisms that are harmful to humans, animals and the environment. In the event of an overflow you would need to stop using your toilets, sinks and other drains and keep away from the affected area until the blockage has been cleared and the area has been thoroughly cleaned by Sydney Water staff.

Wastewater overflows can happen at any time of day. It typically takes about five hours before Sydney Water has unblocked the pipe and cleaned the affected area.

Wastewater overflows – options

There are two options. We can't offer an option with a bill decrease, because if we spend less on inspecting wastewater pipes, we would need to spend much more reacting to blocked pipes.

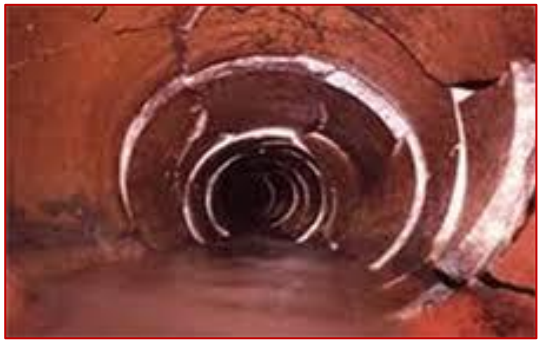
At the moment, we are thinking of including Option A in the plan, based on what customers have told us about how much they are willing to pay to avoid wastewater overflows.

15. Which option would you prefer? (You will be able to change your answer when choosing your preferred overall package at the end of the survey)
    a. Option A – no change
    b. Option B – improve (you pay $65)
    c. No firm preference

Inspecting your pipes

Rainwater gets into the wastewater system via faults or disrepair in private plumbing, including:

- downpipes being connected to the wastewater system instead of the stormwater system
- cracked pipes running from customer premises to our wastewater pipes



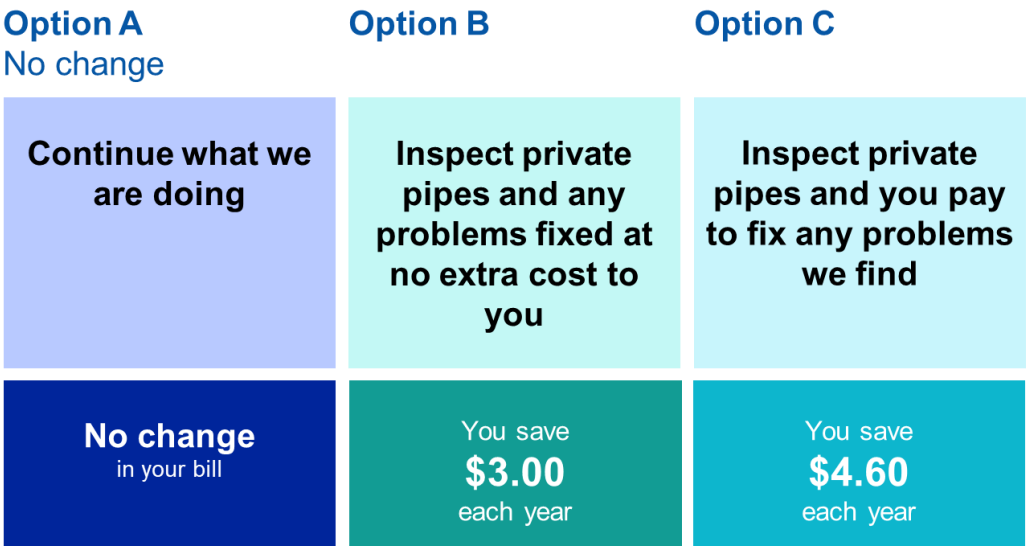
This can cause wastewater overflows on properties further down the system. Sydney Water has to build bigger pipes and storages to stop this happening. Building this infrastructure comes at a cost.

It would be cheaper to fix the problems with plumbing on customers' properties. This would involve Sydney Water inspecting your plumbing.

The average cost of fixing any problem we find would be around $8 500. One option would be to recover this cost from all customers through Sydney Water prices. Another option would be for the individual customers with faulty plumbing to pay the cost themselves. Many of these customers would be unaware of the problem.

Inspecting your pipes – options

There are three options.



At the moment, we are thinking of including Option B in the plan, based on what customers have told us about this topic at forums and focus groups.

16. Which option would you prefer? (You will be able to change your answer when choosing your preferred overall package at the end of the survey)
    a. Option A – no inspection program
    b. Option B – inspection program and problems fixed at no cost to you (you save $3.00)
    c. Option C – inspection program and you pay to fix any problems (you save $4.60)
    d. No firm preference

Digital meters

Unlike traditional meters, which are read in person each quarter, digital meters can provide you with more frequent information about water usage on your property. This could be hourly data, updated once a day.

Digital meters would be read automatically, meaning we wouldn't need to enter your property.

As part of any program to install digital meters, you would be able to choose whether to get the following automated notifications from Sydney Water via SMS to your phone (or via email):

- Leak alerts
- High use notifications
- Bill predictions
- Check-in alerts

Sydney Water could also provide a mobile phone app or website where you could see more detailed information, for example:

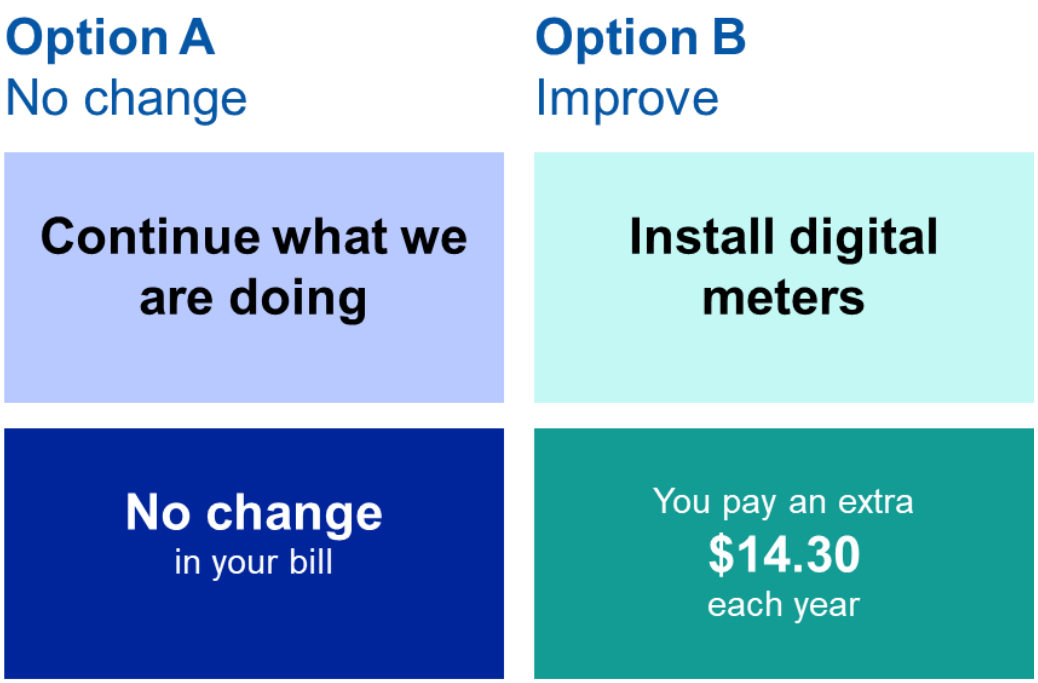
- Hourly usage data
- Usage comparisons to similar types of properties

These features could help you:

- identify hidden leaks
- avoid unexpected changes in quarterly bills
- catch watering systems that have been left on
- find out when water use is zero for an elderly relative.

Digital meters – options

There are two options.



At the moment, we are thinking of including Option A in the plan, based on what customers have told us about how much they are willing to pay for digital meters.

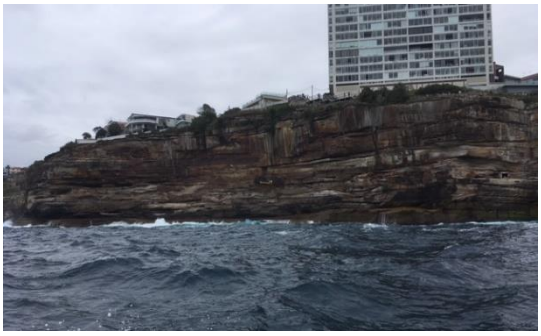
17. Which option would you prefer? (You will be able to change your answer when choosing your preferred overall package at the end of the survey)
    a. Option A – no change
    b. Option B – improve (you pay $14.30)
    c. No firm preference

Untreated wastewater ocean outfalls

Most of Sydney's wastewater is treated and then safely released deep in the ocean, but there is one area in Sydney where the wastewater is not treated. Instead, it is released directly into the ocean at three locations, or as we call them "outfalls", at the bottom of cliffs along Sydney's coastline. Built between 1916 and 1936, this is the only wastewater system in New South Wales that that puts untreated wastewater into the ocean 365 days of the year.

Every day, these three outfalls put four Olympic swimming pools' worth of untreated wastewater into the ocean, along with 2-3 wheelie bins' worth of plastics and hygiene products.

Despite this, water quality testing that occurs every six days at recreational areas near the outfalls continuously shows good water quality. The pollutants are in a relatively small area of ocean near the outfalls.



There are two main problems caused by the raw wastewater outfalls:

- Public health risks
- Ecosystem impacts

Public health risks close to the outfall sites

- Around 2000 people visit the affected areas each year for spear fishing, rock fishing and swimming
- Around 300 people have direct contact with pollutants through organised swim and paddle events

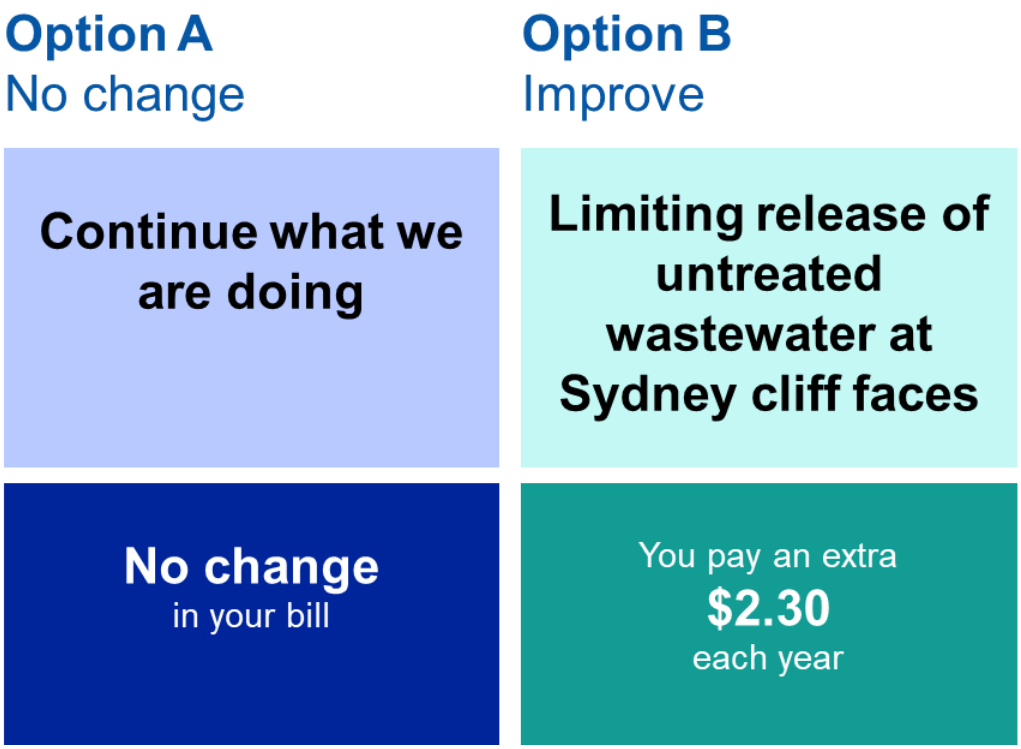
Ecosystem impacts close to the outfall sites

- Degraded ocean floor habitat
- Increased algae
- Floating rubbish
- A bad smell
- Wastewater visible 75% of the time, including oil and grease on top of the water

Untreated wastewater ocean outfalls – options

Sydney Water can reduce these public health and ecosystem impacts by investing in new infrastructure to divert the untreated wastewater into another part of the network where it will be treated.

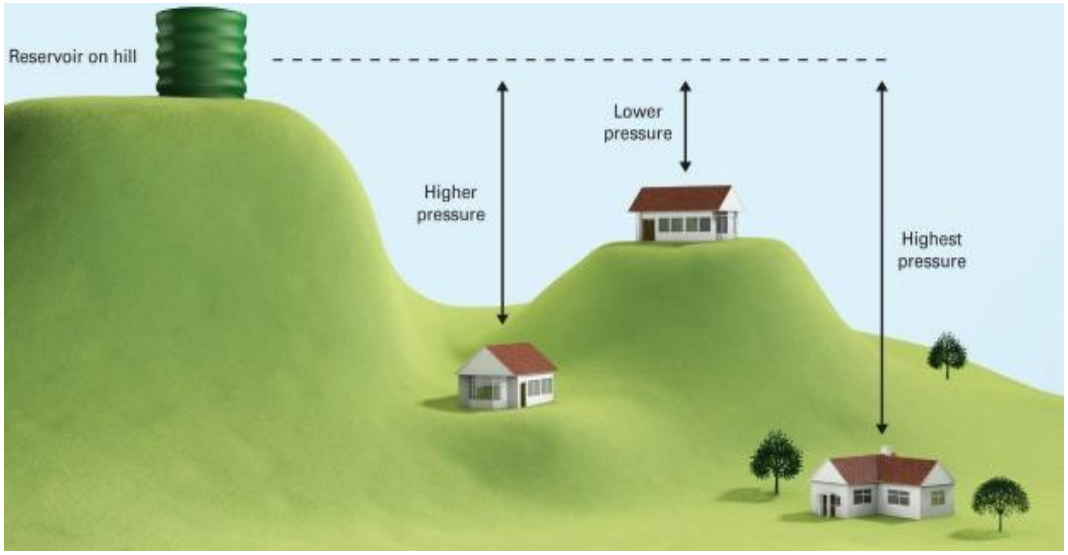
This investment will ensure that the standard of the wastewater system in the area is in line with the rest of Sydney. It will mean that in the future the outfalls will only operate as emergency release valves - meaning that diluted untreated wastewater may still be released into the ocean when the system cannot cope with the volume of rainwater that gets into the pipes.



18. Which option would you prefer? (You will be able to change your answer when choosing your preferred overall package at the end of the survey)
    a. Option A – no change
    b. Option B – improve (you pay $2.30)
    c. No firm preference

Water pressure

Water reservoirs are located at high points. Water gets from reservoirs to your property using gravity. Water pressure varies at different locations depending on how far your property is from a water reservoir and the elevation of your property in relation to the reservoir.



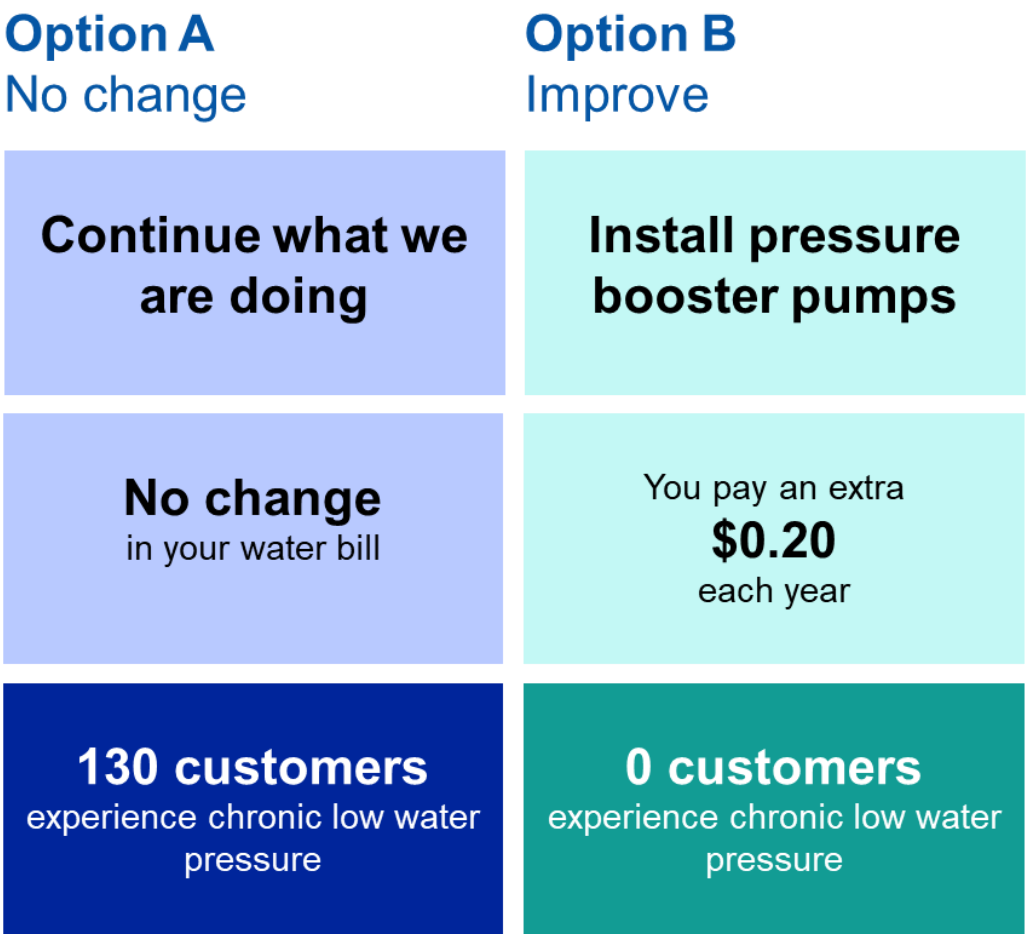
Water pressure in our system can fall when people are using water or when a pipe breaks. In areas with lower pressure, this may result in slow flow of water from your taps. You may notice:

- taking a few minutes to fill a bucket
- only a trickle of water coming from second-floor taps/shower
- not being able to use water in more than one place in the home (e.g. not being able to shower while using the washing machine).

There are around 130 properties in Sydney, typically in rural or low-density areas, that experience these low-water-pressure events on a regular basis. In some areas these events occur on an almost daily basis.

Water pressure – options

Sydney Water can improve water pressure to these 'worst-served' properties by investing in water pressure booster pumps.



At the moment, we are thinking of including Option B in the plan, based on what customers have told us about how much they are willing to pay to fix chronic low water pressure.

19. Which option would you prefer? (You will be able to change your answer when choosing your preferred overall package at the end of the survey)
    a. Option A – no change
    b. Option B – improve (you pay $0.20)
    c. No firm preference

STORMWATER CUSTOMERS ONLY

Waterway health

Stormwater pollution affects the health of creeks and rivers in Sydney. Sydney Water is considering a program to improve waterway health across Sydney (in the catchments of the Georges, Cooks and Parramatta Rivers).

Sydney Water would:

- Plant and maintain native vegetation in open spaces and near creeks and waterways
- Create and maintain wetlands near stormwater channels
- Construct recreation facilities such as bicycle and pedestrian paths, seating and shelters, boardwalks and viewing platforms at these locations
- Install trash racks and booms in waterways to collect litter

Over time, this would increase the amount of river length that supports healthy populations of fish and birds.

STORMWATER CUSTOMERS ONLY

Waterway health – options

		Option A No change	Option B Improve
		Continue what we are doing	Undertake a waterway health improvement program
	Your bill	No change in your water bill	You pay an extra $2.90 each year
	Length of waterways in good health in 30 years	35 of 362 kilometres	36 of 362 kilometres
	Native vegetation planting (including wetlands)	5 hectares	10 hectares
	Recreation facilities	10 sets	18 sets
	Rubbish and litter removed each year	80 truck loads	130 truck loads

At the moment, we are thinking of including Option B in the plan, based on what customers have told us about how much they are willing to pay to improve waterway health.

20. Which option would you prefer? (You will be able to change your answer when choosing your preferred overall package at the end of the survey)
    a. Option A – no change
    b. Option B – improve (you pay $2.90)
    c. No firm preference

Overall package for 2020-25

Now we want to confirm your preferred package of options for our 2020-25 plan.

We try to keep bills as low as we can, but some of the factors driving our costs are outside our control, such as interest rates. Whether your bill will go up or down in our 2020-25 plan depends on these external factors, as well as the options in this survey.

For this survey, assume that your annual bill would

INSERT ONE OF THE FOLLOWING ON LEAST FILL LOGIC (ALSO TO BE USED IN THE 'PACKAGE' QUESTION)

go down by $100 in 2020 if we keep doing what we're doing.

stay the same in 2020 if we keep doing what we're doing.

go up by $100 in 2020 if we keep doing what we're doing.

In the next question, we will show you the overall impact on your bill from your chosen options. You will be able to change your choices if you wish.

Overall package for 2020-25

he answers you have given are shown below. The overall change in your annual bill from 2020 will be shown at the bottom of the page once an option has been selected for every row. To confirm your preferred package of options for our 2020-25 plan, please make any changes to your selections and click 'next'.

This is the most important question in this survey, so please take your time to work out the best package for you.

SEE SEPARATE EXCEL CALCULATOR

SET THE 'ANNUAL AMOUNT YOU PAY' AT THE BOTTOM TO 4X THE QUARTERLY BILL ESTIMATE INPUT IN Q6/Q7 PLUS THE CHANGE CALCULATED IN THE CELL ABOVE.

IF POSSIBLE SET DEFAULT ANSWER TO EACH QUESTION USING THE ANSWERS TO THE CORRESPONDING QUESTIONS EARLIER IN THE SURVEY (NOTE THE ORDER OF OPTIONS IN THE CALCULATOR IS NOT THE SAME AS THE ORDER IN THE EARLIER QUESTIONS FOR WATER INTERRUPTIONS OR INSPECTION PROGRAM).

PLEASE SET THE BILL IMPACT FOR 'EXTERNAL FACTORS' IN THE UNDERLYING CALCULATOR EQUAL TO THE AMOUNT ALLOCATED ON PREVIOUS PAGE.

PLEASE SHOW THE 'WATERWAY HEALTH' ROW ONLY TO STORMWATER RESPONDENTS.

28. Were you unsure about any of your choices?
    a. I was unsure about most of my choices
    b. I was unsure about one or two of my choices
    c. I was sure about all of my choices **SKIP TO Q30**

29. Why were you unsure (tick as many as apply)?
    a. I didn't have enough time
    b. I didn't have enough information / the information was unclear
    c. I didn't like the overall bill under any option
    d. The questions were too confusing
    e. I wanted to discuss the options with other people
    f. The options were too similar / the changes were too small
    g. I'm concerned the outcomes might differ from those shown in this survey
    h. Other _____

30. To what extent did you think about the way options would affect other customers?
    a. I thought a lot about which option would be best for the community
    b. I mostly thought about which option would be best for me
    c. I thought only about which option would be best for me

31. Earlier in the survey we told you that your responses will help inform our plans which will affect your bill and the services you get from Sydney Water. To what degree do you expect the results of this survey will affect decisions made by Sydney Water?
    a. I believe it is very likely the survey will affect Sydney Water's decisions
    b. I believe it is somewhat likely the survey will affect Sydney Water's decisions
    c. I don't think the survey will affect any of Sydney Water's decisions

CITIZEN ONLY

32. Is the place you live in:
    a. Owned outright or with a mortgage

b. Being rented or occupied rent-free

c. Other (please specify) _____

33. Do you speak a language other than English at home?

a. No, English only **SKIP TO Q35**

b. Yes

34. What is the main language spoken at home?

a. Arabic

b. Australian Indigenous Languages

c. Cantonese

d. Croatian

e. Dutch

f. French

g. German

h. Greek

i. Hindi

j. Indonesian

k. Italian

l. Japanese

m. Korean

n. Lebanese

o. Macedonian

p. Mandarin

q. Polish

r. Punjabi

s. Serbian

t. Spanish

u. Tagalog

v. Turkish

w. Vietnamese

x. Other (please specify) _____

y. Prefer not to say

35. Are you of Aboriginal or Torres Strait Islander origin?

a. Yes
b. No
c. Prefer not to say

36. Which best describes your household:

a. Couple/family without children at home
b. Couple/family with children at home
c. One parent family
d. Group household
e. Single person household
f. Other

37. What is your work status?

a. Working full time
b. Working part time/casually
c. Student
d. Not currently employed
e. Home duties
f. Retired
g. Other

38. What is your approximate annual household income before tax?

a. Less than $41,600
b. Between $41,600 and $78,000
c. Between $78,000 and $104,000
d. Between $104,000 and $156,000
e. More than $156,000
f. Do not wish to answer

39. In what type of dwelling do you live?

a. Separate house
b. Semi-detached, row or terrace house, townhouse
c. Flat or apartment
d. Other

BUSINESS ONLY

40. Do you have clients/customers at your business premises?

    a. Never / very rarely
    b. Some of the time
    c. Very often / all of the time
    d. Prefer not to say

41. How much of your business activity takes place at your business premises?

    a. All/most of our business activity
    b. Some of our business activity
    c. Little/none of our business activity

42. Is your place of business:

    a. Owned outright or with a mortgage
    b. Being rented or occupied rent-free
    c. Other (please specify) _____

43. For how many years has your business been operating?

    a. Less than 1 year
    b. 1-2 years
    c. 2-5 years
    d. 6-10 years
    e. More than 10 years

44. Are you…

    a. Male
    b. Female
    c. Non-gender-specific
    d. Prefer not to say

45. What is your age?

    d. Less than 18 years
    e. 18-29 years
    f. 30-39 years

g. 40-49 years
h. 50-59 years
i. 60-69 years
j. 70-79 years
k. 80 years or more

46. What is your position or title within your business?

a. Owner / proprietor
b. Senior management
c. Other employee

47. Finally, is there any feedback you would like to provide on this survey?

_____
_____
_____
_____

Thank you for participating in this survey. Your opinions are very important.

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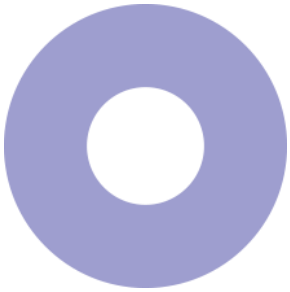
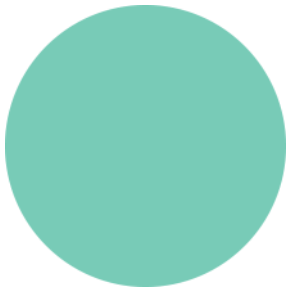
www.TheCIE.com.au

SW231 06/19

Appendix 3E

How we engaged with customers

Price Proposal 2020–24

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Figures

Tables

1 How we engaged with customers

1.1 A phased approach

Our customer engagement program was delivered in three distinct phases over 2018. This approach allowed us to:

- validate what we heard with customers in previous phases, by bringing back results or preliminary preferred options for testing
- bring outputs on specific topics all together in Phase 3, in the context of the overall bill.

It also allowed us to obtain customer insight on issues relating to both the Operating Licence and price reviews over a staggered timeframe, so we could use this information to inform our regulatory submissions in 2018 and 2019.

We used a mix of engagement techniques in each phase, including deliberative forums, discussion groups, one-on-one interviews and online surveys. This mix was designed to:

- avoid reliance on single source of evidence
- include techniques that promote feedback and discussion between customers
- include quantitative techniques that could supply inputs to cost-benefit analysis
- be inclusive of all customers, including businesses, financially-vulnerable customers and customers speaking languages other than English.

The numbers of customers we engaged with and the various techniques used in each phase are outlined in Figure 1-1. Section 1.2.2 explains how participants were representative of our customer base.

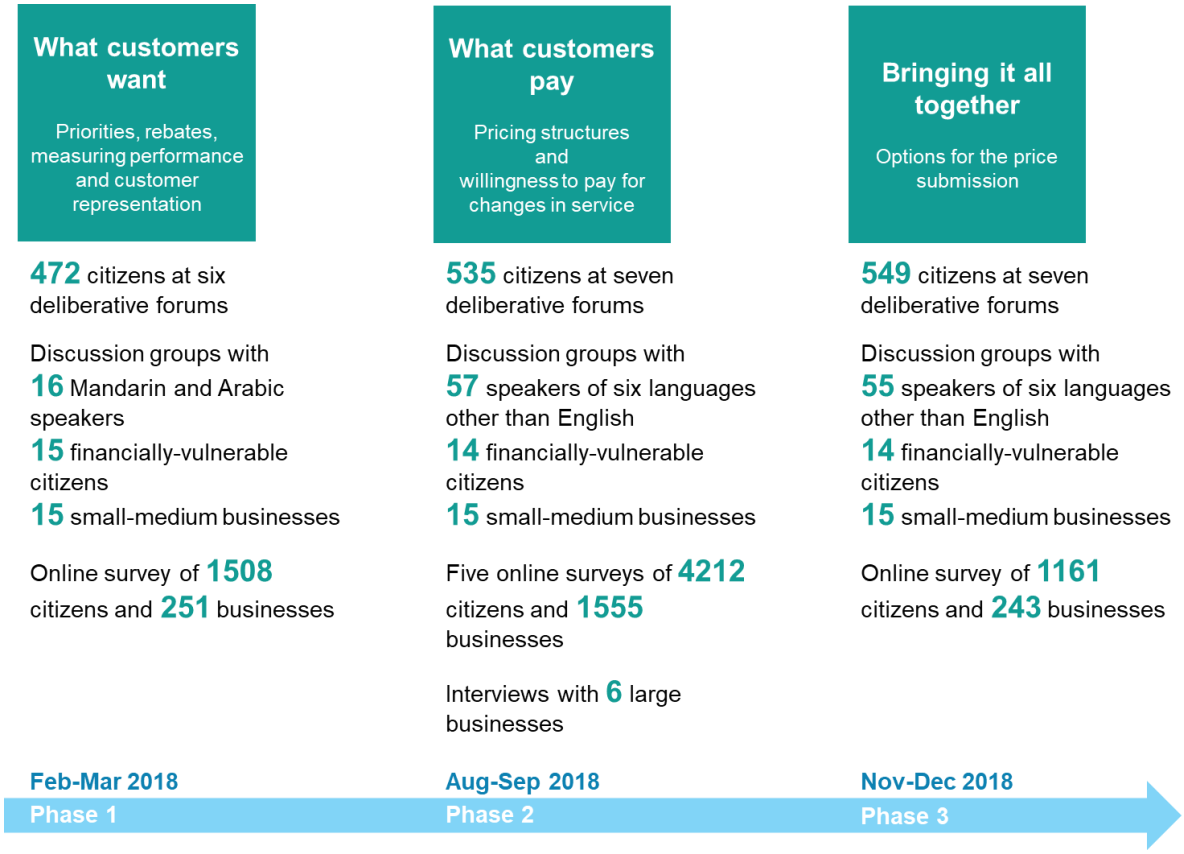


Figure 1-1 Numbers of customers and methods used in each phase

1.1 Methodologies used

We used a comprehensive and contemporary approach to assessing willingness and capacity to pay. Targeted studies in Phase 2 measured customers' willingness to pay as defined in economics literature; that is, the bill increase at or below which a consumer would definitely agree to a service improvement. These estimates were used to place monetary values on the benefits of service improvement in cost-benefit analysis of options from a community standpoint. The importance of validating and triangulating these results with other sources of evidence has been highlighted by water regulators and customer groups in the UK.[1] Phase 3 of our program did exactly that by presenting options to customers at the bill impacts expected to result from each option, allowing customers to compare this against other options and their total bill, and measuring the proportion of customers in favour of each option.

We are confident that our estimates of willingness to pay and customer support for service options take account of customers' capacity to pay. The studies used rigorous stated preference techniques which emphasised to participants the consequentiality of the research; that is, the fact that their input will influence the service they receive and the bills they pay. Before answering valuation questions, respondents in the online surveys were asked to remember their income is

[1] For example, see the 'Improving willingness-to-pay research in the water sector' report prepared for the UK Consumer Council for Water at https://www.ccwater.org.uk/wp-content/uploads/2017/07/Improving-willingness-to-pay-research-in-the-water-sector.pdf.

limited and there may be other things you want to pay for. In other words, participants were asked about reallocating their existing budget and not about an amount they would like to be able to pay if they hypothetically had greater income. There was no incentive for a customer to indicate a willingness to pay an amount beyond their capacity to pay.

1.2 Alignment to IPART principles

The sections below describe how our approach met the customer engagement principles outlined in IPART's Guidelines for Water Agency Pricing Submissions.[2]

1.2.1 Relevant

The utility targets its engagement at the issues it is seeking input on and makes the engagement relevant to the circumstances of the utility and its customers.

We talked with customers about aspects of our planning where their input could have an impact. When planning the engagement, topics were included where there was a clear 'thread' from the initial engagement on the topic, through to informing options and then specific business decisions about our plans for 2020–24. The topics we talked about focused on levels of service, pricing structures and specific projects under consideration that would have an impact on customers in terms of service or price (or both). This targeted approach to engagement did not prevent customers from telling us about other service aspects or issues that were important to them.

1.2.2 Representative

The utility gives a representative sample of customers potentially affected by the proposal meaningful opportunity to participate and sufficient time to provide their views.

Sample sizes for each engagement activity were selected to enable generalisation of the results to the wider customer base with a good level of precision. For example, in Phase 3, the sample size of 549 residential customers at deliberative forums plus 1161 residential customers in the online survey gave a 95 per cent confidence interval on voting results of around plus or minus 2.3 per cent. This means that where a project option is supported by 60 per cent of the sample we can say with 95 per cent confidence that the project would be supported by between 57.7 and 62.3 per cent of the residential customer base. The wider confidence intervals around findings for subgroups with smaller samples sizes were considered when drawing conclusions.

All participants recruited by market researchers, rather than through self-nomination, to ensure the representativeness of the sample. Samples used in our deliberative forums and online surveys were stratified by age, gender and language other than English (LOTE) (and, in some instances, Aboriginal and Torres Strait Islanders) for citizens and by location for citizens and businesses according to the underlying populations in Sydney Water's operating area. To engage harder-to-reach customers, we conducted in-language discussion groups in six languages, held dedicated group discussions with financially-vulnerable customers and small and medium businesses and

[2] IPART 2018, *Guidelines for Water Agency Pricing Submissions*, IPART, Sydney, page 24.

held in-depth interviews with large businesses. For smaller group discussions, participants with a range of characteristics were recruited.

1.2.3 Proportionate

The utility conducts engagement that is proportionate to the potential impact on service and/or price and does not place an undue burden on participants.

Most of the topics we talked about with customers had implications for their bills and/or the service levels they would experience, not only in 2020–24, but over several decades. Where topics had a small potential impact on the participant, such as the water pressure improvement program, they were covered in as short a time as practicable and included only as part of a multiple-topic interaction with customers.

1.2.4 Objective

The utility's engagement is objective and not biased towards a particular outcome.

We engaged reputable third-party economists and market researchers, the Centre for International Economics (CIE) and Woolcott Research and Engagement (WRE), to design and conduct our engagement activities. These researchers also engaged an academic expert peer reviewer, Professor Riccardo Scarpa, to provide assurance for specified elements of the engagement program. All stimulus material used in the engagement activities was designed to be factual and balanced. Options were presented for both service improvements and bill reductions, where relevant. Where Sydney Water staff were involved in engagement activities, such as presenting at deliberative forums, participants were told that the researchers conducting the table discussions were independent of Sydney Water, that there are no right or wrong answers and to let everyone express their views. The online survey instructions reminded respondents that their responses would remain anonymous.

Sydney Water was deliberately transparent with participants, providing feedback to customers on the results of previous phases as the engagement program progressed. Sydney Water was also transparent with stakeholders, inviting members of the Customer Council, IPART and industry peers to observe deliberative forums throughout the engagement program.

1.2.5 Clearly communicated and accurate

The utility provides clear and accurate information to customers during the engagement process. The utility presents information in a form that makes clear: what the purpose of the engagement is; how the utility will use the results; any potential trade-offs between service and price; and the impacts (including cumulative impacts on services and/or bills) of the options being considered. Customers are provided with feedback on how the results of the customer engagement have informed the utilities' position.

All engagement activities involved informing customers about the purpose of the engagement. Customers were told their input would help to inform Sydney Water's decisions and submissions to its regulator on service standards and prices. Customers attending the forums and discussion groups were provided feedback on how their input in previous phases of the engagement program

had influenced decisions and/or regulatory proposals. This document provides further information for customers on the influence their input has had on this price submission.

Trade-offs between price and service were a focus of many of the topics we talked with customers about. In all cases, participants were presented with information on the impacts of each option both on their bills and on service and other outcomes (such as environmental improvements). We also provided background information to help customers understand how the options would affect them (for example, on baseline service levels). Subject-matter experts from Sydney Water were on hand at the deliberative forums to answer any further questions.

1.3 Who we engaged with

Sydney Water defines its customer base as every person and business that comes into contact with its products and services. Recruitment of representative samples from this customer base was managed by the CIE and WRE. Participants were recruited primarily by phone (fixed line and mobile) for deliberative forums and from online panels, Pureprofile and Lightspeed Research, for surveys. In-language discussion group participants, financially-vulnerable customers and small and medium businesses were recruited by a specialist market research recruiter. Financially-vulnerable customers were defined as those holding a concession/low income healthcare card who had requested an extension for paying utility bills in the last 12 months. Businesses were represented in the discussion groups and surveys by owners or managers of businesses with designated commercial premises. The engagement program itself did not include activities open to customer self-nomination, to ensure unbiased assessments of customer preferences.

When recruiting for the deliberative forums, quotas based on the underlying population were set for location, age, gender and language (English or other). When recruiting for online surveys, similar quotas were set for age and gender for citizens and for location for both citizens and businesses. Soft quotas were set for employment size and industry to ensure a mix of businesses were included in the samples. In all cases, citizens or businesses with personal or professional connections to Sydney Water or its regulators were screened out.

Home owners paying bills directly to Sydney Water were intentionally oversampled to ensure sufficient representation, with a quota of 70 per cent applied in the deliberative forums compared to a population share of 60 per cent. For Phases 2 and 3, which focused on price-service trade-offs and price structure, tenants that do not pay any amount (including to their landlord) for water and wastewater services were screened out of online surveys. The Phase 2 and Phase 3 surveys comprised up to 75 per cent direct bill payers. In the Phase 1 online survey, where the tenant screening was not applied due to the more qualitative nature of the research, this proportion was slightly lower at 68 per cent. Preferences were generally similar across home owners and tenants.

Participants in deliberative forums received $100 to cover any out-of-pocket expenses associated with their participation and were provided with a light dinner. Participants in groups for languages other than English or financially-vulnerable customers received $80 and participants in groups for small and medium businesses received $125. Survey respondents were compensated through their panel providers' existing rewards programs.

1.4 Collecting results

The various engagement techniques used to collect data in our engagement program are described in Table 1-1.

Table 1-1 Engagement techniques used in 2018 program

Technique	Description
Deliberative forums	Each forum was attended by 80-100 citizens and ran for around 3.5 hours on a weekday evening. They covered a range of topics and consisted of a stimulating mix of roundtable discussions, presentations/speakers from the front, quizzes, voting with handheld keypads and feedback presentations from each table. Participants spent most of the time working in small groups of 8-10 participants, with a table facilitator from WRE. Each forum involved provision of detailed information via presentations from Sydney Water staff and paper handouts and sufficient time for participants to develop a clear understanding of the issues and of the options facing them. This information had been developed with CIE and WRE and improved through testing in pilot forums with Sydney Water staff. Results were collected quantitatively through keypad voting on hand-held devices (and displayed in real time) and qualitatively through time-coded notes taken by facilitators during table discussions. An example of the innovative techniques used to collect data at the forums was an exercise in which each table was asked to allocate 100 tokens to ten specified events according to the level of rebate each event should attract.
Discussion groups	These groups ran for around 1.5 to 2 hours and followed a similar format to the forums, but with all materials provided in a written format that the facilitator read out to participants. Sydney Water staff were not involved in conducting these sessions, to ensure participants felt they could speak openly.
In-depth interviews	In-depth interviews with large business customers followed a similar format to the discussion groups, but were conducted by WRE over the phone, with materials sent by email prior to the interviews.
Choice experiment surveys	Online choice experiment surveys were used to estimate customer willingness to pay (or accept bill reductions) for changes in service attributes associated with water supply interruptions and wastewater overflows. They involved presenting respondents with a sequence of six choice questions. Each choice question presented a status quo scenario plus two hypothetical scenarios with specified cost and asked the respondent to indicate their preferred option. The scenarios were described by multiple attributes and the levels assigned to attributes varied over scenarios and over questions. This variation was designed to support statistical estimation of the value placed by respondents on changes in each attribute. These surveys and the contingent valuation surveys described below were peer reviewed by Professor Riccardo Scarpa – an international authority on the application of these techniques.

Contingent valuation surveys	Online contingent valuation surveys were used to estimate customer willingness to pay for digital meters, untreated wastewater ocean outfalls and addressing persistent low water pressure. They involved presenting respondents with the specific program or project proposal and asking whether they would vote for the proposal at a specified cost. The cost level is varied over respondents to allow the estimation of a demand curve and the expected value of maximum willingness to pay for the proposal.
Best-worst scaling survey	An online best-worst scaling (BWS) survey in Phase 1 was used to rank the average level of customer inconvenience from 19 specified service failure events. This involved presenting respondents with a brief explanation of water interruptions, wastewater overflows, water pressure failures, discoloured water and billing enquiries by phone and how those events can affect customers. Each respondent answered six BWS questions. Each question presented three events and asked the respondent to identify the least inconvenient (best) event and most inconvenient (worst) event. The questions were designed so that each event appeared an equal number of times and each possible pair of events appeared in a question together an equal number of times, allowing a fair comparison of the results.
Bill calculator survey – usage charge slider	The online surveys on price structure in Phase 2 included a 'slider' question in which respondents could choose the preferred balance between fixed and variable charges. Moving the slider to the left increased the fixed charge and decreased the variable charge, whilst moving the slider to the right decreased the fixed charge and increased the variable charge. Reference points were given for the existing price structure. Respondents were able to adjust inputs, including water consumption (using a second slider) and, for non-residential respondents, meter size and discharge factor. The estimated bill based on these inputs was displayed on the page.
Bill calculator survey – package of service options	The online survey in Phase 3 allowed respondents to customise their preferred package of service options, informed by the estimated bill impact. Respondents were provided with information and options with bill impacts for several topics – water interruptions, wastewater overflows, an inspection program to limit rainwater in the wastewater system, digital meters, limiting untreated wastewater ocean outfalls, improving persistent low water pressure and, for respondents within Sydney Water's area of stormwater operations, a waterway health improvement program. Respondents gave their initial preferences on each topic separately and were told they would have the opportunity to change their answer later in the survey. At the end of the survey respondents were presented with a bill calculator in which they could vary the option chosen for each topic and see the effect on their estimated bill before submitting their chosen package (see Figure 1-2).

Figure 1-2 Screen shot of bill calculator at end of online survey

1.5 Analysing and interpreting the results

All data analysis was conducted by the CIE and WRE and was detailed in four major reports to Sydney Water over the course of 2018. These reports are available at Appendices 3A-3D.

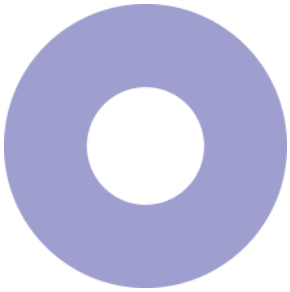
1.6 How we used outcomes from each phase

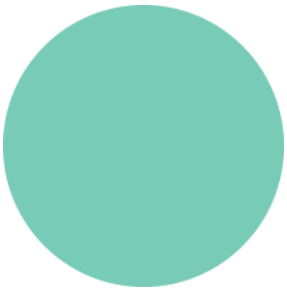
Table 1-2 summarises the role of each phase of engagement by topic and the types of decision that were informed by the engagement findings.

Table 1-2 What we engaged with customers on by phase and how outcomes were used

Topic	Phases	Purpose
Customer priorities	Phase 1: Discover priorities Phase 2: Confirm priorities	Informing our plans and how we communicate them with customers
Measuring service performance	Phase 1: Discover pain points and relative inconvenience of events Phase 2: Targeted studies of willingness to pay (see topics below)	Informing our Operating Licence review submissions
Rebates	Phase 1: Discover preferred weighting and relative inconvenience Phase 2: Confirm proposal	Informing our Operating Licence review submissions
Discounts and fees for channel usage	Phase 1: Discover preferred fees and discounts	Informing our Operating Licence review submissions
Customer representation	Phase 1: Discover preferred approach	Informing our Operating Licence review submissions
Water pricing structure	Phase 2: Discover preferences Phase 3: Confirm proposal	Informing our proposed price structures – see Attachment 4: Proposed prices
Wastewater pricing structure	Phase 2: Discover preferences Phase 3: Confirm proposal	Informing our proposed price structures – see Attachment 4: Proposed prices
Rainwater in the wastewater system	Phase 2: Discover preferences Phase 3: Confirm proposal in context of overall bill	Informing decision on options for managing wet weather overflows – see Attachment 9: Capital expenditure
Water interruptions	Phase 2: Estimate willingness to pay values Phase 3: Confirm proposal in context of overall bill	Informing our Operating Licence Review submissions and regulated service standards for price proposal – see Attachment 2: Service levels and performance

Topic	Phases	Purpose
Wastewater overflows	Phase 2: Estimate willingness to pay values Phase 3: Confirm proposal in context of overall bill	Informing our Operating Licence Review submissions and regulated service standards for price proposal – see Attachment 2: Service levels and performance
Water pressure	Phase 2: Estimate willingness to pay values Phase 3: Confirm proposal in context of overall bill	Informing our decision on a discretionary service offering (subsequently adopted as an Operating Licence standard) – see Attachment 2: Service levels and performance
Digital meters	Phase 2: Estimate willingness to pay values Phase 3: Confirm proposal in context of overall bill	Informing our decision on a broad roll-out of digital meters
Untreated wastewater ocean outfalls	Phase 2: Estimate willingness to pay values Phase 3: Confirm proposal in context of overall bill	Informing our decision on limiting untreated wastewater cliff-face outfalls – see Attachment 9: Capital expenditure
Waterway health	Phase 2: Estimate willingness to pay values Phase 3: Confirm proposal in context of overall bill	Informing our development of the Waterway Health Improvement Program: see Attachment 9: Capital expenditure





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