Smart Approved WaterMark

AUSTRALIA'S RELATIONSHIP WITH WATER

2019

HOW DO WE MAKE WATER VISIBLE?

FOREWORD

The unsung hero in a drought is water efficiency — simply using water wisely.

During the Millennium Drought, water efficiency measures included replacing washing machines, toilets, cooling towers, showerheads, taps and industrial processes to do more with less. In many locations in Australia, water efficiency provided the cheapest, quickest and most effective contribution to managing demand during the drought. Water efficiency was also a way of *delaying* investment in large scale water infrastructure projects such as desalination plants or vast recycling schemes.

A decade on, the Water Services Association of Australia (WSAA) surveyed almost 10,000 people around the country about all things water, including their thoughts on water security*. The results showed that the majority of people think reducing consumption is the answer to water shortages.

In Sydney, 69% of people think reducing consumption is the long-term solution to water shortages. Across Australia, the figure is even higher at 71% and over in Perth higher still at 77%. Added to that, Australia is still regarded internationally as the water efficiency expert despite the fact we have not continued to engage the national community with any significant campaigns or material since the Millennium Drought broke.

With another national drought in full swing in many parts of the country, water corporations and councils are turning to water efficiency to curb consumer consumption.

**Water Services Association Australia (WSAA) Customer Perceptions Survey 2019.*
***World Economic Forum Global Risks Perception Survey 2018-2019*

Climate change is causing more extreme temperatures, more droughts and more floods than ever before. Australia's population is also increasing rapidly with more people flushing high-quality drinking water down the toilet or using it to water their plants.

At least 10 townships in NSW and South East Queensland (as of September 2019) will be facing 'Day Zero' in the next 6-18 months. The forecast is dire with David Jones, a Bureau of Meteorology climatologist, saying the drought has already exceeded the Federation Drought, the WWII Drought and the Millennium Drought in terms of its severity through the Murray Darling Basin.

Consumer demand statistics suggest Australians have maintained a low household consumption rate compared to demand figures for pre-Millennium drought. We suggest this is primarily due to the installation of efficient technologies. An increase in water-efficient behaviour, however, has been less evident...

Common sense tells everyone that finite resources, like water, must be responsibly used and managed. Scientists and researchers have been establishing water measures, innovations and predictions over many years for us all to heed. Even the Global Risks Report** indicates that aside from 'weapons of mass destruction', the other 4 key events most likely to impact our lives in the next 10 years are weather or water-related. Many people understand this, yet the threat of catastrophe does not seem to influence their use of water.

Most people agree it makes sense to keep showers short, reduce running water and scrape dishes rather than rinse them. As an industry, we've created a plethora of posters, reminders and websites all about it. It's all helpful and for the 10% of the population that '*get it*' it's welcomed, but while we continue to push materials and messaging out to consumers, few are acting on it.

So, we find ourselves in a time where water efficiency is key, not to mention easy for everyday people to implement, but simply not a priority.

Like air, water is taken for granted and not consciously used or valued. We hypothesised that by making water 'visible', Australians would relate to it, value it and *want* to use it efficiently.

But how do we make water visible? How does Australia build a conscious relationship with water?

Smart Approved WaterMark (SAWM) wants to raise water consciousness amongst consumers and understand the underlying relationship they have with water to create a force for change around water use.

We want to find out what it will take for Australians to use and value water they have so together we can avoid more 'Day Zero' limits now and in future, and open their minds to re-use and recycling.

Chris Philpot
CEO Smart Approved WaterMark

Author
Smart Approved WaterMark

Smart Approved WaterMark (SAWM) is the one-stop-shop for water efficiency in Australia. Through the Smart Water Advice program, SAWM delivers a range of educational, interactive water-saving resources for councils and water utilities to take to communities about saving water around the home, garden and business. SAWM also certifies water-efficient products and services in Australia and Europe. Since 2004 it has reviewed over 1000 applications and approved more than 300 products and services. Through Smart Water Solutions, SAWM helps businesses reduce their water use and save money by delivering water audits and recommendations. SAWM has also published the 'Water Efficient Australia' 2019 report and 'Water Efficiency 2017' in partnership with Water Services Association Australia (WSAA). Smart Approved WaterMark works towards a future that's blue, a future that celebrates the many amazing qualities of water, sees its strength and acknowledges its vulnerability.

smartwatermark.org

Independent Reviewer
Institute for Sustainable Futures

This report has also been independently reviewed by the Institute for Sustainable Futures (September 2019) to ensure data and outcomes are representative of the data generated by this survey and ethnographic studies.

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SECTION 1

EXECUTIVE SUMMARY

THIS KNOWLEDGE COULD INCREASE THE VALUE OF WATER IN THE EYES OF USERS

The research presented in this report provides the basis for community-based education and national water efficiency initiatives that could change the nation's relationship with water, making it more visible and valuable to all who use it. The findings are based on ethnographic studies undertaken in April 2019 and an online survey of 2,077 respondents from across Australia in May 2019.

91% of respondents believe 'water is precious'. However, when asked, 'water' and 'tap water' are not regarded as the same thing. Their feelings about 'tap water' expose a very different relationship and reality.

Concern for the environment is shared across generations. Yet this concern rarely extends to issues pertaining to water, such as droughts, water shortages or dam levels.

As a nation who believes water is precious, there is a disconnect between the impact they have on water in the environment and the water they rely on every day. Until they were asked to think about it, our survey respondents found it difficult to value tap water — especially the younger generations.

For most Australians, tap water is a daily necessity — with respondents reaching for it as much as 16 times a day, every day, with 69% of respondents saying they'd 'freak out' if their taps stopped flowing.

It seems clear that the use of household water is subconscious and that awareness of the water-saving capability of standard taps and toilet devices is also unknown with many appliances being subconsciously used and chosen. The last time most respondents learned anything about the household water cycle was in high school. Consequently, we can see that water literacy is low amongst the respondents, with only 64% knowing where their household water comes from and 45% saying they definitely *don't think* about where it comes from.

Our older generations have higher water literacy which is reflected in their environmental concerns, willingness to save and their use of water-efficient devices.

Despite passing their water knowledge down to their children, that pattern did not repeat, with efficient water behaviour depleting with every younger generation. A key reason for the generational decline is that those who have been affected by water shortages, have higher water literacy and are more likely to believe tap water is precious. 53% of Baby Boomers claim to have been affected by shortages as do 49% of Gen X as opposed to 35% Gen Y and only 24% Gen Z.

Whilst 63% of respondents agreed they could save more than they do, evidence shows that most are generally on autopilot when it comes to household water use. They suggested they would use water wisely if they knew where it came from and where it went. Gen Z and Y, in particular, said they could save more water than they do.

We conclude it will take a personal water shortage for younger generations to see and appreciate 'tap/household' water — and to understand the connection between their own water use and the 'water in the environment' they value so highly.

This knowledge could increase the value of water in the eyes of the users, starting a conscious relationship with water that could drive behaviour change towards more efficient domestic water use. This relationship could also provide scope to bring more people along the purified recycled water and greywater journeys with education campaigns, once the basic household water cycle has been understood.

In the pages that follow we detail what Australians really think about water and provide insight into the motivation Australians need to use water efficiently. Our respondents make up a significantly robust data set that enables us to consider the results reflective of the nation.

Generations

Gen Z — 14-22 years old

Gen Y/Millennials — 23–38 years old

Gen X — 39-54 years old

Baby Boomers — 55-80 years old

WE ASKED THE FOLLOWING QUESTIONS:

1 DO AUSTRALIANS CARE ABOUT WATER?

2 DO THEY THINK ABOUT THE WATER THEY USE?

3 DO THEY KNOW WHERE WATER COMES FROM?

4 IS THERE A GENERATION GAP IN WATER KNOWLEDGE AND BEHAVIOUR?

5 WOULD AUSTRALIANS ABANDON 'AUTO-PILOT' FOR A 'RELATIONSHIP' WITH WATER?

6 HOW DOES AUSTRALIA BUILD A CONSCIOUS RELATIONSHIP WITH WATER?

THE TOP ASSOCIATIONS AUSTRALIANS HAVE FOR WATER ARE:

73% LAKES AND RIVERS

86% RAIN

SECTION 2.1

DO AUSTRALIANS CARE ABOUT WATER?

When we asked 50% of respondents what came to mind when they thought of 'water', 91% of respondents said 'water' was precious. Their expressed feelings about tap water expose a very different relationship and reality. When we asked the other 50%, what came to mind when they thought of 'tap water' they said that 'tap water' was less natural, less precious and separate to 'water in the environment'.

They clearly differentiated 'tap water' from 'water', with 'water in the environment' associated with rain, lakes and rivers and 'tap water' associated with infrastructure and chemicals. Respondents did not include 'tap water' in their thinking when we asked what 'water' means to them. As a result of it being seen as less natural, *tap water* is considered to be less precious than water in the environment.

'Tap water' is seen as less natural, precious and limited

What else comes to mind when you think about water/tap water (%)

Water		Tap Water	
Drinkable	72	Drinkable	71
Natural	64	Natural	25
Precious	63	Precious	42
Clean	57	Clean	56
Limited	43	Limited	29
Safe	38	Safe	51
Sacred	23	Sacred	9
Dirty	12	Dirty	4
Domesticated	9	Domesticated	22
Abundant	7	Abundant	5
Dangerous	6	Dangerous	2
Endless	3	Endless	3
Artificial	2	Artificial	4
Unimportant	1	Unimportant	1

In general, Australians embrace 'natural water' to play in, to visit and relax beside. 'Water in the environment' seems to invoke childhood memories for the respondents and plays a part in many of their recreational activities.

Concern for the 'environment' is shared across the generations. With the youngest, Gen Z, significantly more concerned about global warming, climate change, greenhouse gases, carbon emissions, sea-level rise and the ozone layer than older generations.

The Millennials or Gen Y seem to be the environmentalist generation, significantly more likely to take their concerns for the environment a step further by voting in elections based on environmental policies, choosing products with less packaging, catching public transport, carpooling, buying organic food and more.

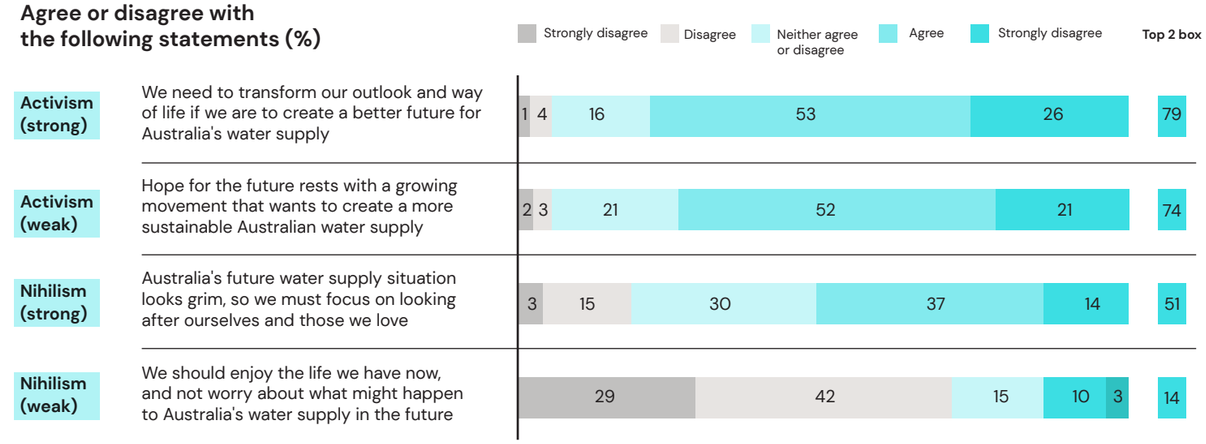
Yet this concern rarely extends to water, such as droughts, water shortages or dam levels. Gen Z is slightly more concerned with water quality than other generations but, it is the least concerned about droughts, water shortages or dam levels. It is the older generations, like the Baby Boomers, that prioritise their concerns to include drought and water shortages, ahead of habitat destruction, animal extinctions, chemicals and pesticides and waste disposal.

It is these older generations who generally hate waste and who get annoyed if they see people 'wasting water' as opposed to youth, who are significantly less likely to feel that water running down the drain is wasted. When asked to agree or disagree with some general statements about the future of water in Australia only a small minority endorsed not worrying about Australia's future water supply. This would suggest that most Australians have the potential to be water activists — something the water industry could really tap into.

So, do Australian's care about water? Based on our statistically significant national findings we believe they could. Making the connection between tap water and the environmental source water would be an important step for customers to understand the value chain associated with the water they use.

Most Australians have the potential to be water activists

Agree or disagree with the following statements (%)



IS WATER PRECIOUS?

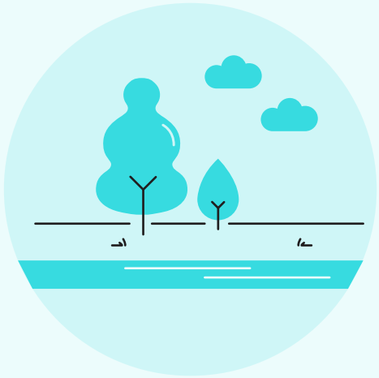
'WATER'

63% believe water is 'precious'

'TAP WATER'

but only 42% believe tap water is 'precious'

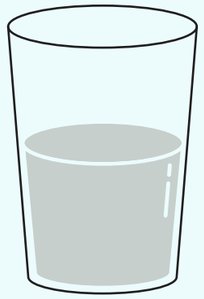
IS WATER SEPARATE FROM THE ENVIRONMENT?



36%

see tap water as separate from the environment

IS TAP WATER NATURAL?



46%

agree that tap water isn't natural

WHAT ARE THE TOP ASSOCIATIONS WITH 'TAP WATER'?

'TAP WATER'

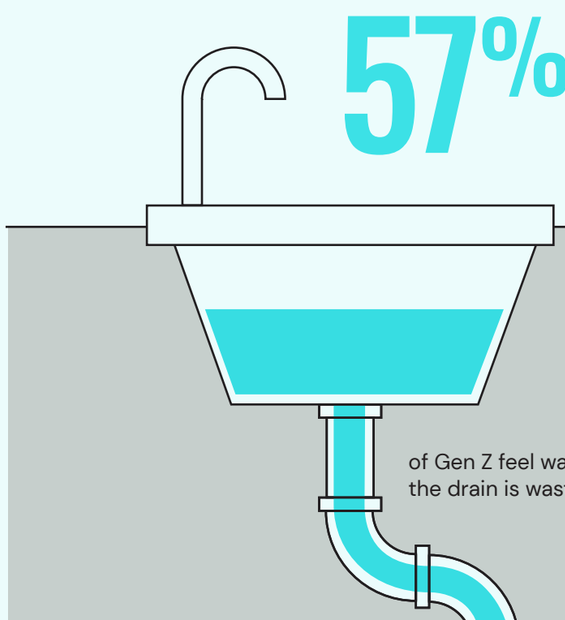
54%

fluoride

52%

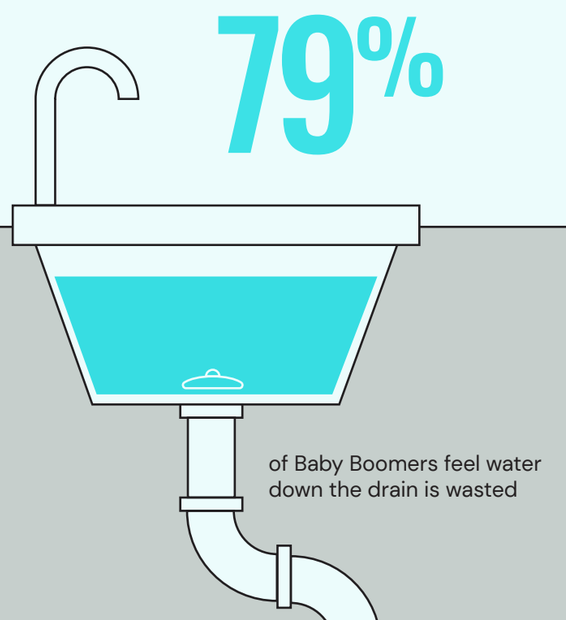
plumbing

IS WATER DOWN THE DRAIN WASTED?



57%

of Gen Z feel water down the drain is wasted



79%

of Baby Boomers feel water down the drain is wasted

"Making the connection between tap water and the environmental source water would be an important step."

SECTION 2.2

DO THEY THINK ABOUT THE WATER THEY USE?

Most Australians don't live without water in their daily lives. Respondents revealed that they reach for it as much as 16 times a day, every day. This is likely under-reported given our ethnographic interviewees were shocked at how subconsciously they used their taps until we forced them not to. In fact, 69% of people surveyed online said they would 'freak out if their taps stopped.'

Even environmental Gen Ys say they leave the tap on and feel stressed about the amount of garden water they use and that, even though they 'know how to save water', they 'find it hard'.

Taps, showers, toilets and washing machines are frequently used, more so in family households as you would expect. Front loading washing machines are consistently used 3 times a week across the country with households with children running them more than 4 times a week.

Elsewhere others are subconsciously using water to deliver on their *'emotional needs'* as opposed to necessity. With 71% of respondents having longer showers to relax, 51% singing throughout their experience and more turning on the washing machine, with far less than a full load, for that one special garment.

76% of respondent households have dual flush toilets and 21% have aerator taps. Older generations are the best users of water-efficient devices, except for front loading washing machines and pool covers. Again, Gen Z has the least water-efficient devices and the most spa baths.

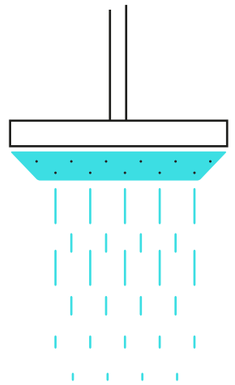
When it comes to reuse and rainwater, a similar result was found. Only 31% of people have rainwater tanks. Only 45% of respondents have ever used greywater (56% of them are regional versus metro) and 38% of respondents not using it are keen to try. Whilst some may be willing to re-use water, few are actually doing it. And, 54% of people say they are doing all they can to save water already. Again, significantly more Baby Boomers than Gen Z.

Some good news here is that as much as 38% of respondents would consider drinking recycled water which is encouraging to hear based on historical negativity. This could indicate that there is scope to bring more people along the purified recycled water journey through education campaigns once the basic household water cycle has been understood.

A number of respondents choose not to save water at all... citing expense, inconvenience and unimportance. Amongst Gen Z, 49% think what they do won't make a difference, 47% say water saving is too expensive or inconvenient.

Despite the apparent subconscious use of their household water 87% of people are sure they use less or as much as their neighbours and 45% believe they are better at 'saving water mindfully'.

The results would indicate that Australians, in general, are *not thinking* about *their own use* of water. Their use is subconscious and the installation of devices is likely by default rather than by choice. Add to this that they are rarely looking to diversify water sources or even reusing the water they have.



71%

of Gen Z sometimes need a longer hot shower to relax

(vs. 63% of Millennials, 51% of Gen X & 31% of Baby Boomers)

51%

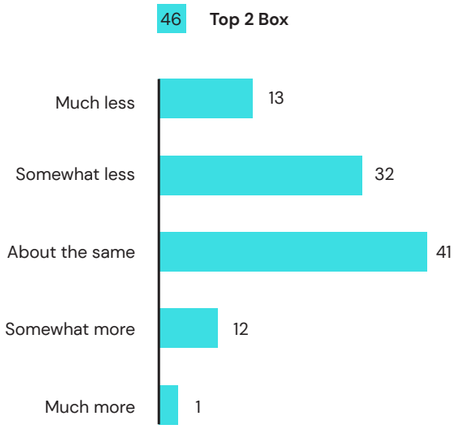
sing throughout their long showers

On a positive note, two-thirds of the respondents indicated that they could save more water. 63% agree they could probably save more water than they do; this is significantly higher for Gen Z (76%) and Gen Y (2%) and lower for Baby Boomers (52%). Those living with family and Young Families more likely to agree (72% and 70% resp). 69% agree that 'if the taps in my household suddenly stopped working, I'd freak out'; this is highest for Gen Z (77%). Significantly lower for Regional (64% vs. 72% for Metro) and SA (60%). 77% of the respondents agreeing that households have an impact on urban areas, waterways and coastal bays... previously considered to be the 'natural water' they deemed 'precious'.

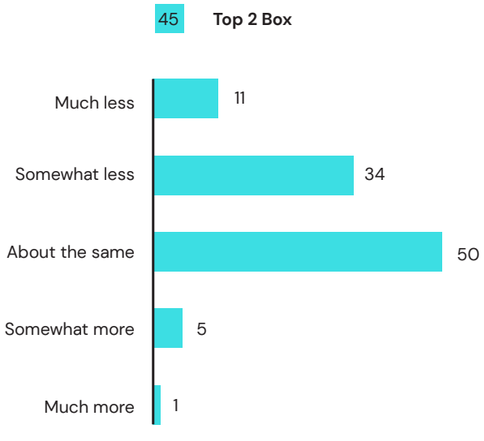
Evidence shows Australians, in general, don't think about the water they use and are most certainly on auto-pilot when it comes to their own water use. This would indicate that there is further scope for the water industry to help residents understand the household water cycle and how water can be saved through appliances *and* behaviour change.

Half of all Australians believe they are better at saving water than their neighbours

Water used vs neighbours (%)



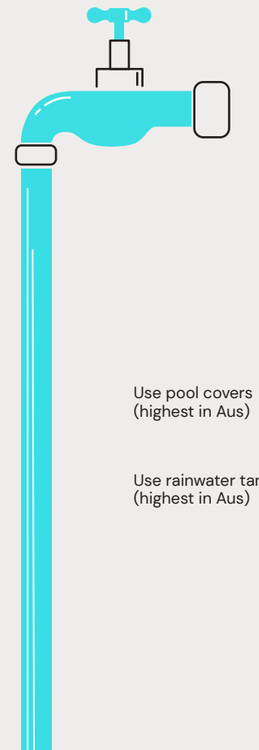
Saving water vs neighbours (%)



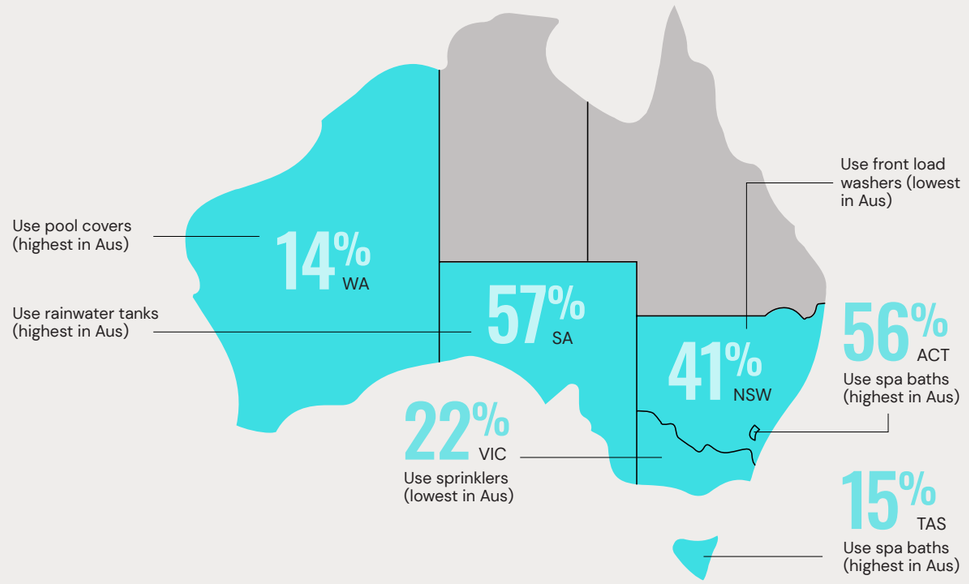
"It's that second life for me that the water goes to something else rather than just down the drain. It's kind of like it ends its life in a good place, going into the soil, that's nice"

Alternative water sources

- 38% said they would be likely/very likely to drink recycled water.
- 45% have ever used greywater in total; Older you get the more likely you are to use it — 53% for Baby Boomers.



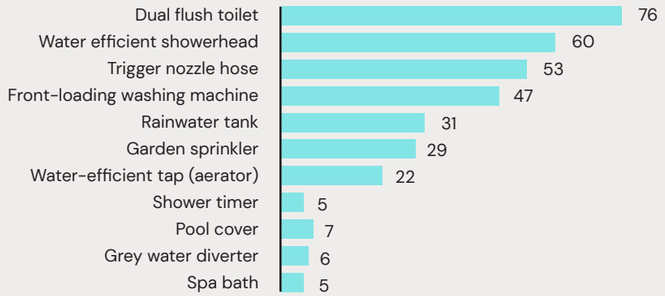
"We've just taken it all for granted, just like you do with anything that feels like it's endless"



Use of water efficient devices

- Most (76%) have dual flush toilets; this is significantly higher for Baby Boomers (90%), Gen X (85%), Regional (80%) and lower for Gen Z (57%), Gen Y (63%).
- Rainwater Tanks (31%) and Aerator taps (22%) are especially low everywhere.
- Showerheads — highest in SA (71%) and lowest in WA (54%) and ACT (50%).
- Trigger Nozzle — lowest in WA with 42%
- Front Loader Washers — highest in ACT (56%) and SA (55%), lowest in TAS (30%) and NSW (41%).
- Rainwater tank — highest in SA 57% and Lowest in WA (18%) and NSW (26%).
- Sprinkler — highest in SA (47%) and WA (42%) and lowest VIC (22%) and NSW (25%).
- Pool covers — highest in WA (14%).
- Spa baths — highest in TAS (15%) and VIC (8%).
- Regionals have more devices; significantly more likely to have a dual flush toilet, trigger nozzle hose, rainwater tank, garden sprinkler, greywater diverter.

Which of the following devices do you have? (%)



There is widespread use and adoption of water efficient devices

IT WAS REALLY HARD TO STOP...

"**I have never been through a day when I haven't used water, ever.** I have a shower, I clean my teeth, I drink it, I wash the dishes in it... Water is a big part of our daily lives."

"We think we're pretty good with water anyway... But probably the one thing that we could cut back on is showers. I think **we probably have really long showers.**"

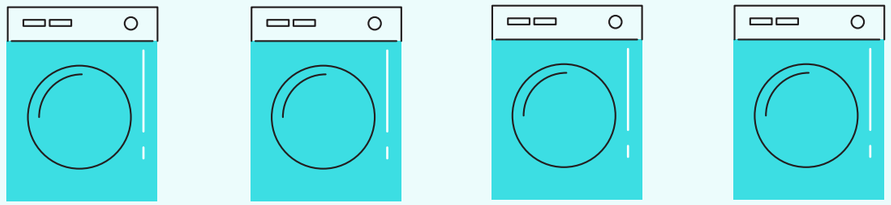
"I'd say we're in the upper percentile of people who are good with water. But overall, washing up I leave the tap running rather than filling the sink with water. I'm not sure which one's more efficient. Probably filling the sink is? **There are some things I could do to be better about it.**"

"I just realised I would usually just rinse, rinse, rinse... leave the tap on with enough pressure to shoot off all the remnants on the plate... all that water pressure and volume **it's just like wasting water.**"

"It was really hard to not turn on a tap. I had to wrap a cloth or towel around the tap to stop me trying to turn it on... It's such a second nature thing and **it was really hard to stop.**"

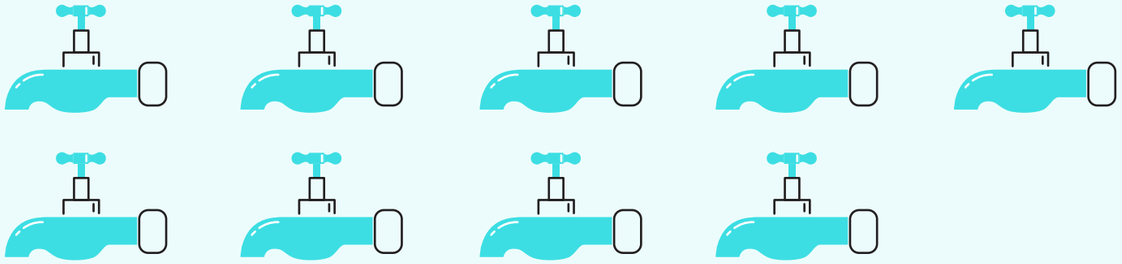
"In third world countries like India they have a short supply of water, and some people have wells... some people won't even have water for days... some of them will be drinking dirty water because that's all they've got... **We take it for granted here** and I think kids these days take it for granted especially. Having running water at our fingertips."

WATER USAGE

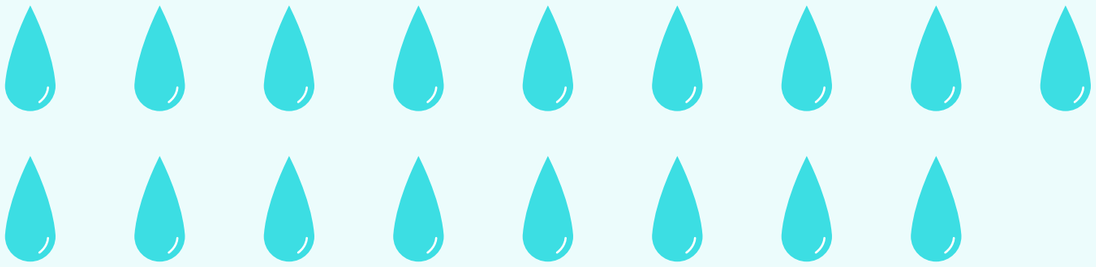


4 times a week, families with children use washing machines, on average.

5 times a day, people flush on average.



9 times a day, people use a tap on average.

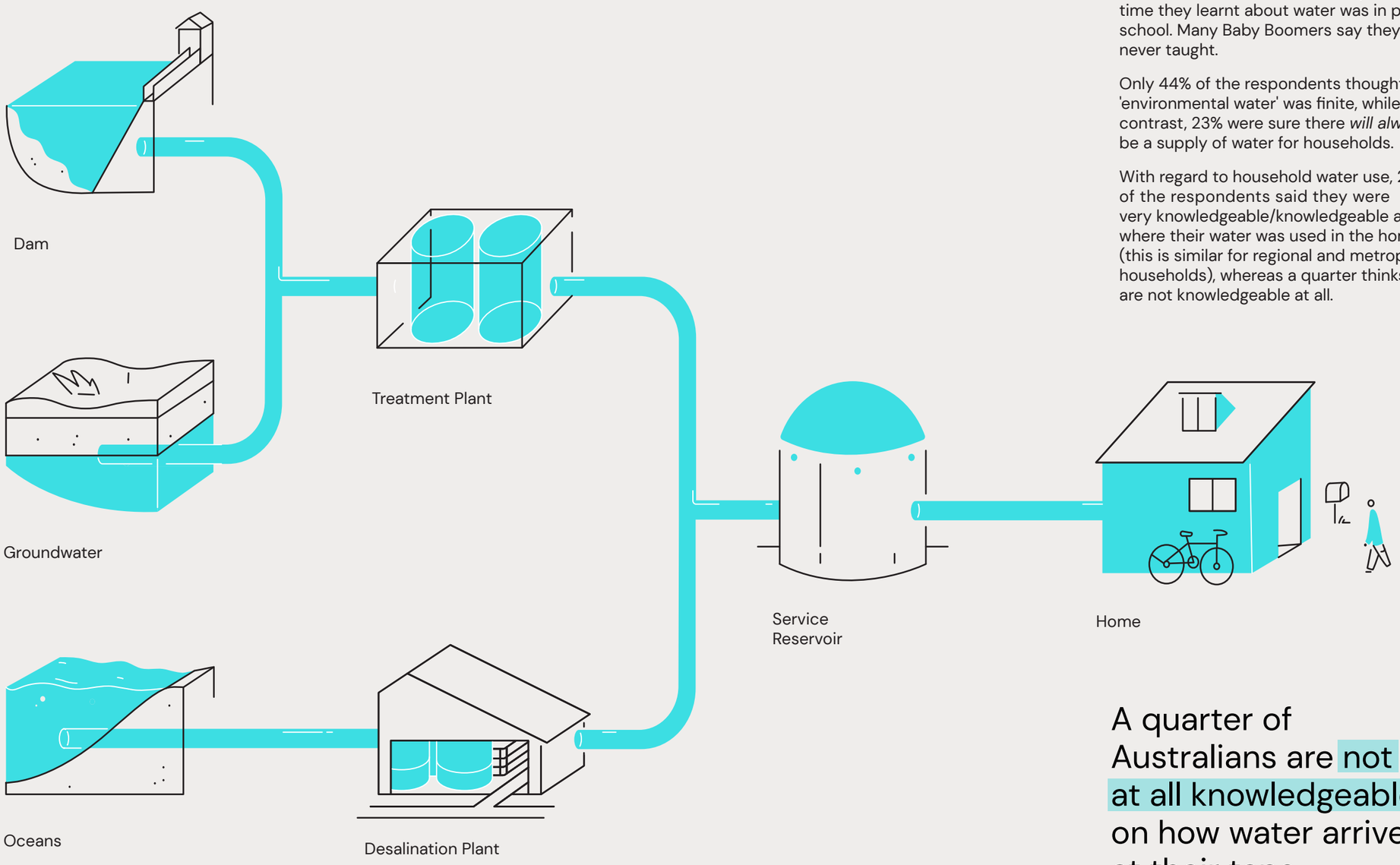


16 times a day at minimum, people reach for water.

In reality, these numbers are likely under-reported, given interviewees from our ethnographic studies were shocked at how subconsciously they reached for the tap, even when we forced them not to.

SECTION 2.3

DO THEY KNOW WHERE THEIR WATER COMES FROM?



Water literacy is low nationwide, with only 64% knowing where their household water comes from and 45% saying they most certainly *don't think* about where it comes from.

The last time most people learned anything about the water cycle was in high school. Interestingly the number of people who could recall the last time they learnt about water was significantly different across the states with higher recognition in ACT (71%), marginally higher in SA at 41% and again in WA (38%). That aside, 23% say the last time they learnt about water was in primary school. Many Baby Boomers say they were never taught.

Only 44% of the respondents thought 'environmental water' was finite, while in contrast, 23% were sure there *will always* be a supply of water for households.

With regard to household water use, 29% of the respondents said they were very knowledgeable/knowledgeable about where their water was used in the home (this is similar for regional and metropolitan households), whereas a quarter thinks they are not knowledgeable at all.

45% of total know their water catchment — this varies considerably by generation: Gen Z (17%), Gen Y (31%), Gen X (46%), Baby Boomers (60%). 53% in NSW know their water catchment but less than 40% in VIC, WA and TAS.

We determined that people who know where their water comes from, water catchments and water treatment, are likely to have higher water literacy than those who do not.

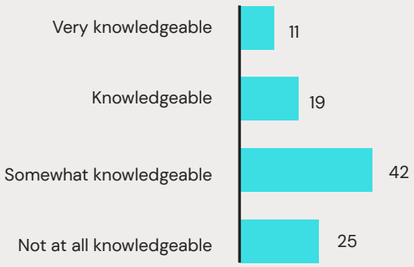
When faced with a very simple visual of a household water cycle it became apparent that few people know where their household drinking water comes from let alone how it is treated or where it goes. 45% of the respondents thought they had changed their views on household supply as a result of the simple visual they were given.

45% don't think about where their tap water comes from (vs. 30% of Millennials and 7% of Baby Boomers). 45% of people think they have changed their thoughts on household supply as a result of the information we supplied. 62% of Gen Z and 56% of Gen Y especially. 47% of metro say yes it changed their minds and 40% of regional.

Once again, it's the older generation with higher literacy, specifically older, *regional* Australians. The seemingly more environmentally conscious Gen Ys still think wastewater from domestic bathrooms and laundries receives little or no treatment before entering waterways, that stormwater from roofs and roads is treated to remove pollutants before entering the waterways and that domestic wastewater and stormwater are carried through the same pipes.

A quarter of Australians are not at all knowledgeable on how water arrives at their taps

Knowledge of water delivery to home (%)



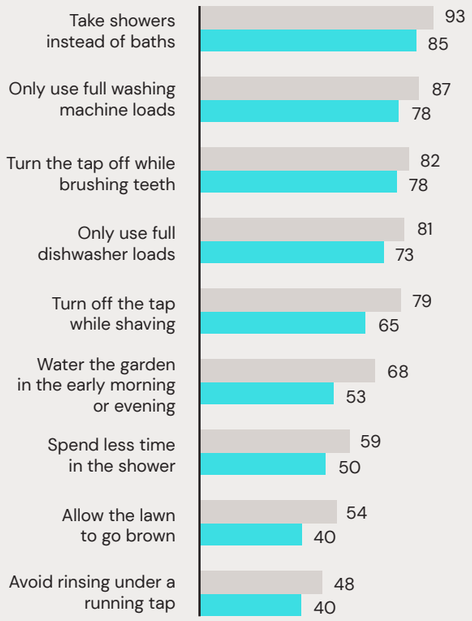
The evidence revealed that those with a higher level of water literacy were more likely to save water.

The impacts of higher water literacy on their environmental concerns, willingness to save and use of water-efficient devices, is significantly higher than those with lower water literacy.

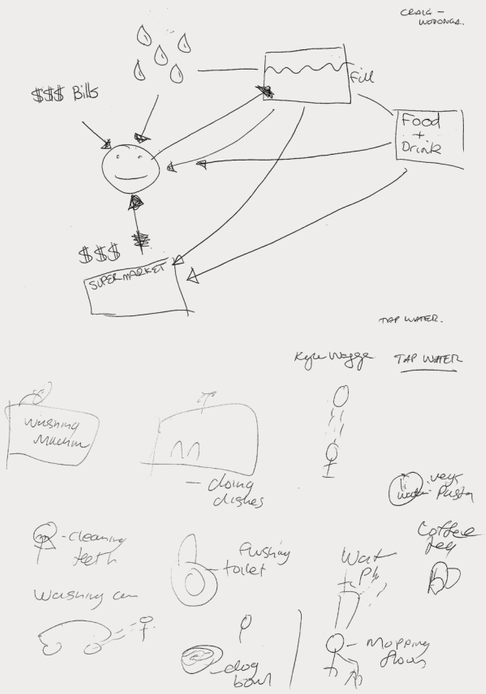
The robust results confirm that Australia has very low water literacy and that one simple diagram can significantly inform and motivate the population to use water wisely.

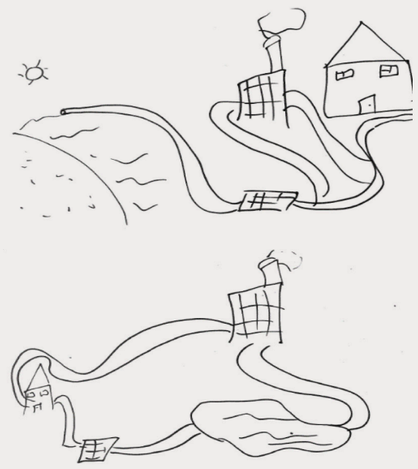
Therefore, we can surmise that by providing customers with information about the household water cycle (not just the natural water cycle) could lead to a shift in water use behaviours to make savings.

Water saving behaviours by water literacy (%)



Examples of drawings we were provided with by our ethnographic interviewees when asked to show us where their household water comes from.





Education does encourage water saving behaviour

IS IT ENDLESS

"Thought that Dubbo had an endless water supply because it's coming from the bore. I don't know. **Is it endless?** All these towns around Dubbo are on water restrictions and we're not. I don't think I can ever remember us being on water restrictions"

SECTION 2.4

IS THERE A GENERATION GAP IN WATER KNOWLEDGE AND BEHAVIOUR?

There is a substantial knowledge gap between generations

Evidence shows that older generations, most notably the Baby Boomers, are more water literate and that this knowledge declines with each younger generation.

Despite 73% of Baby Boomers and 77% of Gen X saying they share water information with their children, it would seem that this has reduced considerably with each of the younger generations. This has resulted in both, them and their children, being far more likely to take water for granted.

Overall 71% discuss with kids — older generations do more and marginally more regional Aussies do too. Regional is 74% vs. 70% for Metro.

Interestingly, Gen Y whilst 63% does less than the other generations which is interesting based on their seemingly green consciousness. (NOTE: Some Millennials could consider their kids too young to discuss this)

Generationally, 53% of Baby Boomers have been affected by shortages, 49% of Gen X compared to 38% of Gen Y and as little as 24% of Gen Z. We believe this is significant in terms of the generation gap because we have determined that those likely to have been directly affected by water shortages, have higher water literacy and are far more likely to believe that 'tap water' is precious.

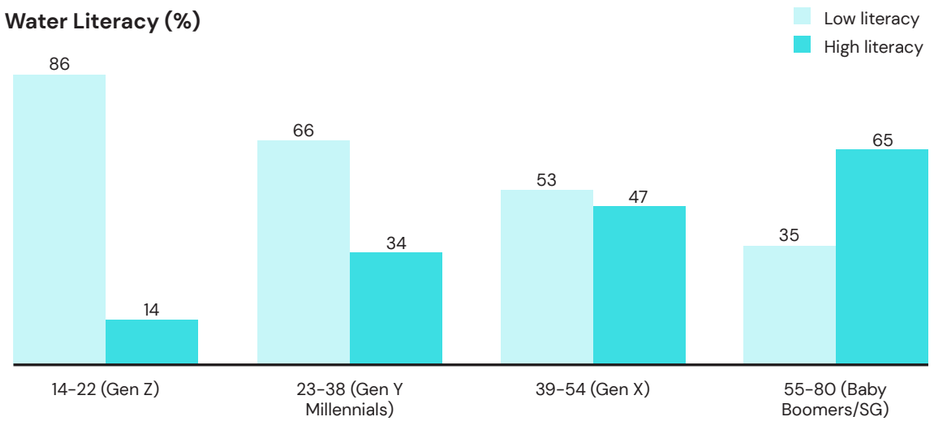
Baby Boomers have higher water literacy (65% compared to 14% Gen Z, 34% Gen Y and 47% Gen X) and as a result include drought, shortages, dam levels in their top concerns.

Gen Z and Gen Y have low water literacy (86/66%) and note climate change, global warming, greenhouse gas as key concerns. Gen Z's have the lowest water literacy of all generations (14% have 'high water literacy', vs. 34% of Millennials and 65% of Baby Boomers).

Based on these responses, it would seem that for people to have an appreciation of the value of water, they would need to have experienced a drought or some form of water shortage in their homes.

Since water shortages are what the industry is trying to avoid, other forms of education initiatives that conscientise people around the impacts of drought are needed.

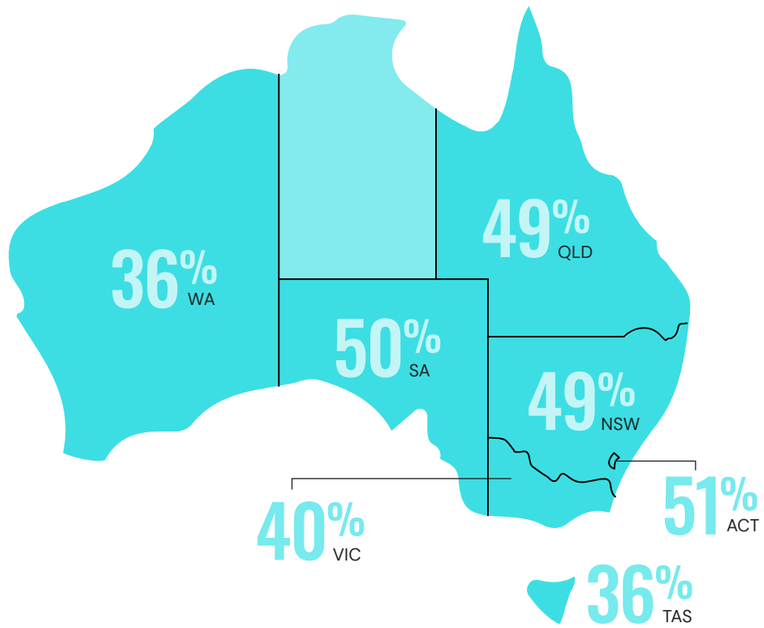
Water Literacy (%)



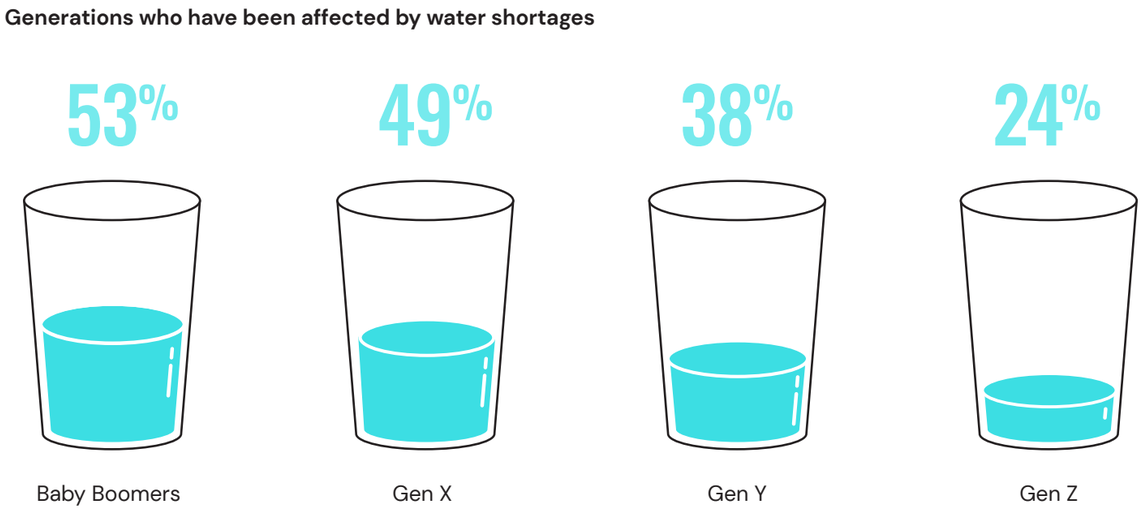
Where the highly water literate respondents live

45%

of respondents classed as being highly water literate



Generations who have been affected by water shortages



Concerned about water shortages in...(%)

While people are concerned about water shortages in Australia generally, this doesn't extend to their local area

WHEN I TURN THE TAP ON THERE IS ALWAYS RUNNING WATER

"My daughter went to the principal with her friend and said you need to introduce glass straws or non-plastic straws...

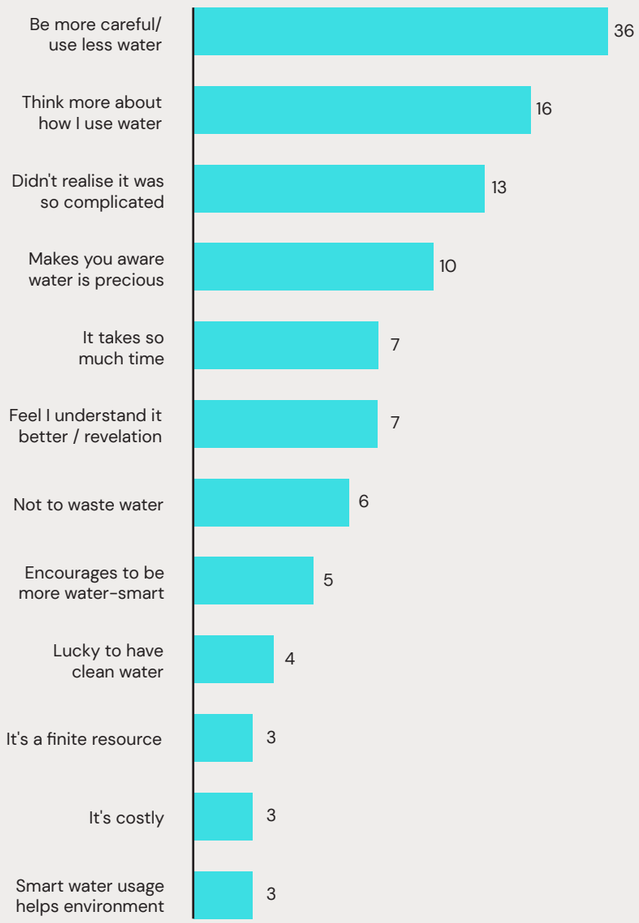
MY DAUGHTER IS GOING TO CHANGE THE WORLD."

"Knowing the quantities of water used for everyday things can shock people into 'seeing' the tap water they currently don't see, or take for granted."

SECTION 2.5

WOULD AUSTRALIANS ABANDON 'AUTO-PILOT' FOR A 'RELATIONSHIP' WITH WATER?

How does it change how you feel about household water supply? (%)



As part of this study, we provided Australians with some basic facts and statistics about the quantities of water used for everyday things. 60% were surprised, significantly lower in WA (46%) and SA (48%). 30% said they found the facts hard to believe.

63% of people agreed that the information about average water use in Australian homes would make them think more about how they use it. Knowing the quantities of water and the quality used for everyday things shocked people.

More Australians would use water wisely if they knew where it came from and where it went. 71% of Gen Z's and Y's in particular, said if they knew more about how tap water fits into the broader water cycle, they would be more mindful of their usage.

As part of our ethnographic research, we conducted an experiment that deprived our interviewees of tap water for one night from 5pm until the following morning. When we forced people to experience their own personal water shortage, their eyes were opened to how much tap water they use and waste every day. In fact, those that completed the exercise became very aware of their 'water auto-pilot' — shocked by how subconsciously they reached for the tap. 55% say Australians are addicted to turning on the tap — this is consistent across all generations and states. Significantly more of the higher water literate agree (62%) than those with lower water literacy (50%).

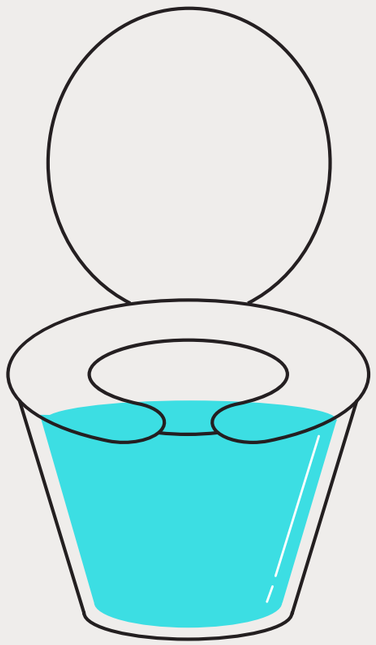
Water knowledge changes behaviour

57%

were surprised to learn how much an average toilet uses.

54%

wanted to reduce the amount of water they flush away upon learning this.



The image of flushing good, clean, drinking water down the toilet could disturb people enough to act, with 57% surprised to learn how much an average toilet uses. Learning this made 54% want to reduce the amount of water they flush away.

More than three quarters of Gen Z and Gen Y agreed '*it is strange* that toilet water is drinkable'; however far fewer of them than the other generations would agree '*it's wrong* to use drinking water for flushing'. Once again it was the water literate group that were in higher agreement (76%).

Overall, 53% of people believe they can save more water; with the low literacy group more likely to agree than the high literacy group (56% vs 49%) and metro more likely to agree than regional (54% vs 49%).

Gen Z is significantly more likely to agree that they could save more water than they do (76%) and significantly less likely to agree they do all they can to save water (40%).

The statistics support our hypothesis that Australians could abandon 'auto-pilot' to save water if they were to have a combination of household water knowledge and a personal drought experience.

Understanding the process had a profound impact on many respondents

IT REALLY MAKES YOU THINK HOW MUCH WATER YOU'RE USING...

"If I could visualize someone pouring 8 litres of Evian into a cistern again and again... someone going to the shop buying 8 litres of Evian water and then pouring it down the toilet... that visualization would be like, 'Oh **how wasteful, that's a wasteful thing**'."

"**It was really hard to not turn on a tap.** I had to wrap a cloth or towel around the tap to stop me trying to turn it on... It's such a second nature thing and it was really hard to stop."

"I was rinsing my 4-yr. old's mouth out and the 2-yr. old turned the tap off while I was brushing... He turned it off because he realised that I'm not using it. **So, it's good, even for a 2-yr. old, to be aware. I was really proud of him.**"

"The next day, when we were done with it, I'd turn on a tap to wash my hands and **I realised I used more water just washing my hands and face quicker than I did in the entirety of last night**... In about one minute of just turning the tap on."

"I think from this exercise they learnt that you should really not waste... my daughter was saying, 'Oh my god I spend so much time washing my face, doing this and doing that'... **She knows that wasting water is bad** and... as a community, we need to save water because everyone needs water specially to grow vegetables and things like that. She's old enough and she understands."

"**It really makes you think how much water you're using because it's the quantity**... When you turn on the tap you don't really know how much is just going out. But when you fill it up you're like, okay we get through this much and this much. You can really measure it."

SECTION 3 – CONCLUSION

HOW DOES AUSTRALIA BUILD A CONSCIOUS RELATIONSHIP WITH WATER?

We asked our respondents to think about 'water' and what associations they thought of. Our research revealed that 86% of Australians associate 'water' with rain and 73% with lakes and rivers.

Why don't they associate it with the water that they interact with multiple times a day, every day of their lives? Even when we asked people to think specifically about 'tap water', their associations were 54% fluoride and 52% plumbing as opposed to its source, accessibility or drinkability.

63% of people think 'water' is precious... but only 42% think 'tap water' is precious. Why does water subconsciously lose its value when it comes out of taps?

Our findings indicate that Australia has an education and experience problem.

23% of the respondents haven't learned about the water cycle since primary school.

27% of Baby Boomers claim they were never taught about the water cycle.

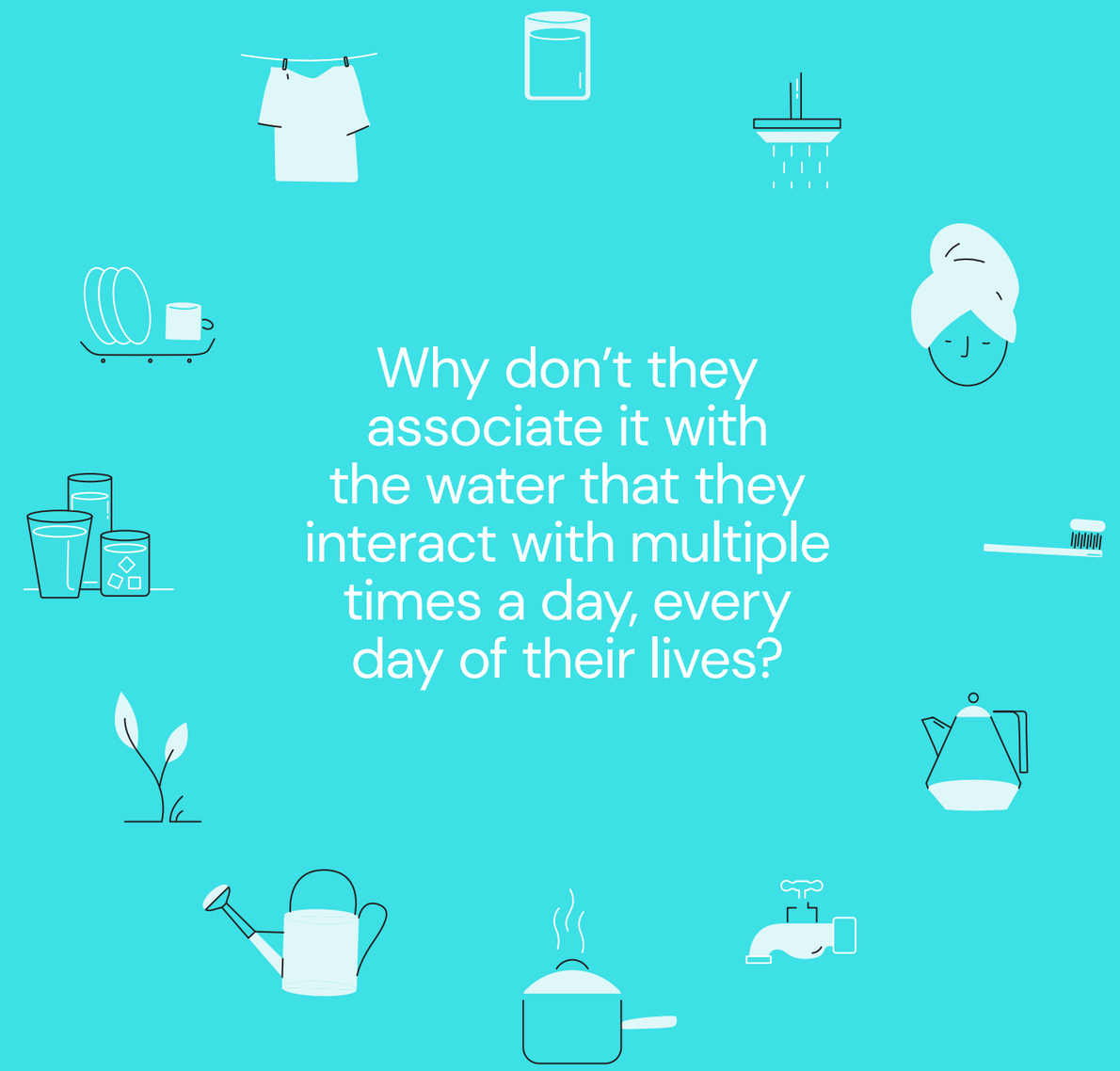
36% of the respondents don't know where the water, that comes out of their tap, comes from.

44% of respondents think water is finite.

23% of Australians believe there will always be water supply available to Australian homes.

24% of Gen Z and 38% of Gen Y say they have been affected by water shortages.

Australians who have been affected by water shortages are more likely to consider tap water 'precious'. So, there is a huge gap in education and experience for the younger generations.



Gen Z is:

- Most likely to take tap water for granted.
- Most likely to say they need to take long hot showers to relax.
- Least 'water literate'.
- And, whilst they are the least water literate, they are the greatest opportunity since they are also the:
- Most likely to care about environmental issues.
- Most open to learning about their water usage.
- Most open to changing behaviours for environmental reasons.
- The people with the least knowledge and the worst habits are also the ones with the most desire to change. This appetite for change is shared.

54% of people said they wanted to reduce their toilet water wastage after learning how much water was used for every flush.

62% of 14-38-year olds said they would be mindful of their water usage after learning more about how tap water fits into the broader water cycle.

22% of respondents (26% of families with young children), for example, said they'd be interested in conducting a 'personal water shortage' experiment, where they go without household water for a day.

In fact, 8 households took the challenge with these insights:

"It was really hard to not turn on a tap. I had to wrap a cloth or towel around the tap to stop me trying to turn it on... It's such a second-nature thing, and it was really hard to stop."

"The next day, when we were done with it, I'd turn on a tap to wash my hands and I realised I used more water just washing my hands and face quickly than I did in the entirety of last night... in about one minute of just turning the tap on".

We have a long way to go to get water literacy to where it needs to be to make a difference. However, Australians are generally ready and willing to go on that journey. Education is the bridge they need. Experience is the motivator.

We can't live without tap water. But, as we've discovered, we can (and do) live without thinking about it.

If we want Australians to have a relationship with water, that needs to change. We need to find ways to encourage Australians to turn off auto-pilot and recognise the water that has been invisible for too long.

The key opportunities lie in building household water cycle education into curriculum and consumer communications going forward and to providing some sort of personal drought or shortage experience to everyone whether they are inhabiting a region under water restrictions or not.

Once everyday Australians have learnt about the tap/household water journey we can build in the overlays of reuse and recycling.

There is an appetite for both today but if people don't understand or value basic tap water principals then greywater, rainwater tanks, desalinisation, pipelines, dams, purified recycled water and more are likely to be ignored at best and avoided at worst.

In conclusion, the key to building a relationship between everyday Australians and water lies in the 3 E's.

Understand the household water cycle through

EDUCATION

Inspire conscious use through

EXPERIENCE

Grow relationships with water through

ENDEARMENT

SECTION 4

RECOMMENDATIONS

1

Education: Update education and curriculum — renewing knowledge and understanding of how tap water fits into the household water cycle, starting with our younger Australians — upskilling Gen Z's as the agents of change

The results of the water literacy exploration suggested that NSW, VIC and QLD had a very limited understanding of piping and treatment for household, stormwater and wastewater.

If we were able to ensure that the curriculum extended its remit to the very basic water cycle to tap and back model, we would be starting the conversation with our youngest generation of water-efficient users — and their parents and extended family.

If children can be inspired and informed then that knowledge has a chance of being discussed at home and at school increasing water literacy now and for future generations.

CASE STUDY

THE 'WATER IQ' PROGRAM IN TEXAS USA WAS DEVELOPED BASED ON SIMILAR PRINCIPALS

In 2004, Texas Water contracted for a research project to support the Water Conservation Implementation Task Force recommendation regarding the establishment of a state-wide water conservation public awareness campaign. The project included development strategies, research, and branding for a possible state-wide water conservation effort and was funded by a voluntary coalition of 36 utilities, municipalities, businesses, and conservation groups. The research stressed the need for making individual Texans aware of the importance of water conservation, including water reuse, to their future as residents of the state. As a result of this research, the brand 'Water IQ: Know your water' was identified as a way to bring awareness about water knowledge and conservation.

wateriq.org

Highlights from the comprehensive 2004 research study include:

• 87% of Texans are more likely to conserve water after learning more about water conservation and hearing ideas about ways to save water.

• 98% of Texas residents think water conservation is important.

• Only 28% of Texans say they "definitely know" the natural source of their drinking water.

2

Experience: Evolve the popular and effective deprivation study to become a state-wide pilot activation focused on raising the visibility of water and conscious use of household water - with a view to rolling it out nationally

As a result of the positive feedback we received about the deprivation study included in our ethnographic interviews, we asked our online respondents if they would undertake the same or similar challenge and 51% said they would be somewhat/very/extremely likely to participate. Gen Y 58% were the most enthusiastic about the challenge. And 55% of Gen Z more likely to do the challenge than 44% of Baby Boomers.

"I think there was a sense for (the kids) it was a bit of an adventure, a bit of fun to just experience it."

Proposed Activation:

Go without water for a day or a night, diarising your water touches (the frequency you use your taps, toilets etc) as you go, pledging to reduce your water touches by half, from there on in.

"I think if I just turn the tap on for less time and make small changes like that, I can definitely adjust to that. And then see small steps. And then eventually move over to having bottled water a few nights a week"

CASE STUDY

'IMAGINE A DAY WITHOUT WATER' CAMPAIGN BY US WATER ALLIANCE IS IN ITS 5TH YEAR

Our American peers have been running an annual campaign called 'Imagine a day without water' to get householders and businesses thinking about how they would feel and what they would do without water for a day. Their campaign agenda is to advocate for significant infrastructural investment in ancient pipes and leaks, however, the approach to market, the social sharing, the ease of connecting and actions is a good framework for our possible initiative.

imagineadaywithoutwater.org

3

Extend research to include focus groups to test water challenges and creative concepts and messaging for communication campaigns and development of alternative experiential challenges.

Communication Messaging

Messaging that does not tell people what to do, but instead questions their use i.e. Sticker next to taps 'How many times have you touched me today?' next to toilets 'How many times have you flushed me today?'

Messages that encourage mindful use i.e. 'Before you pull the plug have you watered your plants, washed the car or rinsed your recycling?

Messages that are based on humour many of them old favourites, 'if it's yellow, let it mellow', SAWM Cartoons, 'Be a Phenomenal flusher'.

Experiential Challenges

1) Gen Z — open to saving money open to reducing their quarterly water bill to a target amount e.g. $200 (at 55% appeal, this was the highest), but significantly higher than Gen X and Baby Boomers on the tap challenges — 53% for trying to reduce the number of times tap is used and 36% for only using the taps for an hour a day.

2) Reducing quarterly water bill to a target amount — most appealing to Gen Y (62%), Metro (52%) and regional (48%) least appealing to Baby Boomers (42%).

3) Counting the number of times, you turn on the tap in a day and then trying to reduce that number each day for a week — most appealing to Gen Z (53%) and Gen Y (51%); least appealing to Baby Boomers (31%%) and Gen X (36%).

4) Only using the taps an hour each day — most appealing to Gen Z (36%) and Gen Y (35%) and least appealing to Baby Boomers (17%) and Gen X (21%).

5) Two-minute showers for a week — most appealing to Gen Y (35%) and least appealing to Baby Boomers (21%).

6) Consistency in interest in the challenges across states — apart from SA which generally has the lowest appeal and is significantly less interested in 'only turning the taps on an hour each day' (14%) and 'two-minute showers for a week' (16%).

55%

of Gen Z are open to reducing their quarterly water bill to a target amount e.g. $200

36%

of Gen Z would try using the taps only one hour each day

HOW MANY TIMES HAVE YOU TOUCHED ME TODAY?

53%

of Gen Z would try counting the number of times they turn on a tap in a day

SECTION 5

METHODOLOGY

This thought leadership body of research shares clear, actionable insights we can all use to influence positive water habits across Australia.

The theoretical frameworks we drew on included:

- Strategic questioning approach — Fran Leavy
- Human values framework — S. Schwartz
- Behaviour change theory (wheel) — Motivations, Ability and opportunity
- Systems thinking
- Qualitative research projections and elicitation technique

Objectives

Understand current knowledge, attitudes and behaviours to water usage by evaluating:

- Knowledge of water issues in the wider context of other concerns
- Attitudes to water efficiency in terms of habits, social norms and influence on behaviour change
- Current behaviours and underlying triggers and barriers to changing behaviour

Ethnographic Interviews — April 2019

Habits and social norms are often invisible and/or subconsciously motivated and as such, we decided the research should be ethnographic in approach. 8 ethnographic interviews were carried out across NSW between 3 April and 15 April 2019 to unearth the subconscious drivers of current behaviours and barriers to change.

8 x Respondents aged 25–40 years old

Deprivation Study

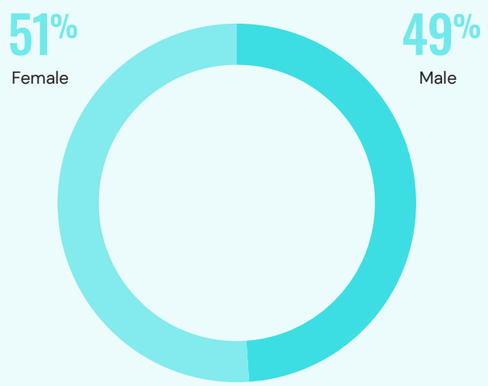
We asked people to turn their taps off for one night and journal their experience before and after.

From 5 pm you can't turn on any tap in your household. Collect any water you need to get you through the night. Flushing the toilet is the one exception.

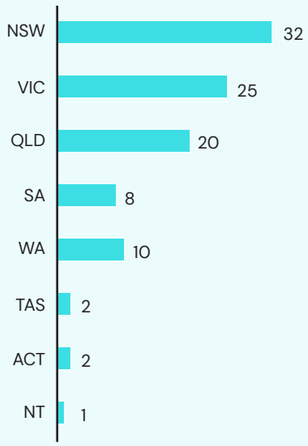
Location	Household type	Dwelling Type	Socioeconomic Status
Burwood (Syd)	DINK	Apartment	High
Erskineville (Syd)	DINK	Small House Block	
Cherrybrook (Syd)	Young Family	Large House Block	
Kiama	Young Family	Small House Block	Med
Coffs Harbour	DINK	Small House Block	
Wodonga	Older Family	Large House Block	
Dubbo	Young Family	Large House Block	
Wagga Wagga	Older Family	Apartment	Low

WHO WE SPOKE TO

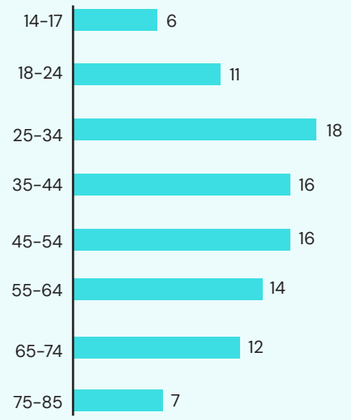
Gender



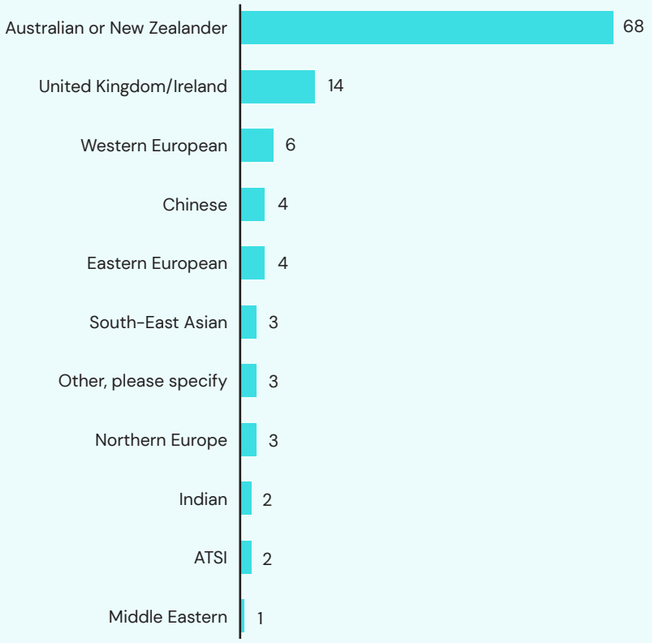
Location (AU) (%)



Age (%)



Family Background (%)



Smart Approved WaterMark wants to raise water consciousness amongst Australians

Quantitative Validation — May 2019

As validation, we undertook a 15-minute online survey to provide a robust, statistically significant quantitative sample to drive media take-up and wider engagement.

We ensured that the results were representative of the Australian population. The survey was based on a nationally representative sample of n+2,077 Australian, based on age, gender, dwelling type, lifestage, size of household, ethnicity/ CALD, religion and location (including metro/regional split). These attributes were expected to be strongly related to levels of water use and associated attitudes. We sent the survey and set-up the ethnographies with subjects that were 'on the grid' for water, i.e. those only who have treated, piped water supplied by a water service provider and not those reliant on bores or rainwater tanks.

A 'systems thinking' approach to the aspects that drive behaviour change meant we needed to consider a mix of elements:

- **Attitudinal:** attitudes, subjective norms, perceived behavioural control/impact (agency)
- **Belief:** environmental beliefs, ecological world view, water-specific beliefs
- **Habits and routines:** household habits (e.g. clothes washing, showering, garden watering)
- **Personal capability:** age, education, income, occupation, knowledge
- **Contextual factors:** number of household residents, dwelling type, water pricing, home ownership vs renting

The final data was weighted to ABS statistics based on age, gender and location. This way we were able to ensure that aggregate results are reflective of the population, whilst also enabling us to see differences among key target groups.

SECTION 6

APPENDIX AND FIGURES

2.1. Do Australians care about water?

2.1.1. Precious & Natural

- 91% of Australians agree that water is precious (C6)
- Top associations with water include natural phenomena like 'rain' (86%) and 'lakes and rivers' (73%) (E1A)
- Meanwhile, top associations with tap water include unnatural things like "fluoride" (54%) and "plumbing" (52%) (E2A)
- 36% agree they see tap water as separate to water in the environment. Significantly higher for Gen Z (61%), Gen Y (43%), Live with Family (53%), Metro (38%), Low Literacy (40%)
- More Generation Z (14-22yrs) and Baby Boomers (55-80yrs) agree tap water is not as natural as 'environment water' (E24); the highest agreement is Regional Gen Z (67%)
- 46% agree tap water isn't natural; marginally higher for Gen Z (52%), QLD (50%) and single parents (50%); significantly higher for High Water Literacy (50%)
- In fact, 65% of Generation Z in metro areas are very clear that tap water is separate from' water in the environment' (61% compared to 25% of Baby Boomers and 28% of Gen X) (E24)
- As a result of it being seen as less natural, tap water is considered to be less precious than water (63% link water with being "precious", while only 42% link tap water with being "precious") (E1B / E2B)

2.1.2. Environment

- Gen Z is much more likely than Baby Boomers to care about a range of environmental issues.
- Gen Z are significantly more concerned about global warming, climate change, greenhouse gases, carbon emissions, sea-level rise and the ozone layer than Baby Boomers (A likely result of today's curriculum) (B1)
- Gen Z (By activities done) are significantly less likely than other generations to use kerbside recycling, wash clothes in cold water, recycle batteries, buy products with less/no packaging. They are more likely to catch public transport, carpool and buy organic food.
- Gen Z is marginally more concerned about water quality than other generations. They are less concerned about modified foods than older generations. They are also the least concerned about drought and dam levels. (B1)
- Gen Y has a lot of concerns and seems to be more concerned than others of environment issues — greener than the others despite very low water literacy. (B1)
- Gen Y have low water literacy (66%) and note animal extinction, global warming and climate change, global warming as their top 3 concerns (B1)
- Gen Y wants to be green, tries it all with a few 'buts' (B2 and E24)
- Gen Y significantly more likely (than older generations to) vote in elections based on environmental policies, choose products with less packaging, catch public transport, carpool, buy organic food, eat vegetarian, buy green power, donate money to environmental organisations, buy carbon offsets and get involved in a community garden (B2)
- 47% of Gen X are Highly Water Literate (higher than Gen Z — 14% and Gen Y — 34%); drought and water shortages in their top concerns (B1)
- Gen X is concerned about fewer issues however they place drought, water shortages, water quality and dam levels in the top 8 along with animal extinction, Climate Change, habitat destruction and waste disposal. (B1)
- Gen X seems keen on a few key issues and tows the line but does less of the extreme stuff and is not quite as rigid as Baby Boomers (B2). They are significantly more likely to use kerbside recycling and wash clothes in cold water than younger groups, but less likely to switch off appliances at the wall, have solar panels, buy products endorsed as having a low impact on the environment or vote in elections on the basis of environmental policies than Baby Boomers.
- Baby Boomers prioritise drought, water shortages, drought, habitat destruction, animal extinctions, dam levels, chemicals and pesticides, waste disposal then water quality (B1)
- Baby Boomers (By activities done) Lead the charge on most of the top activities. They are significantly more likely to use kerbside recycling, wash clothes in cold water, recycle clothes, purchase locally grown food, recycle batteries and use solar panels. They are significantly less likely to use public transport, ride bike/walk instead of driving, eat vegetarian, buy organic food, donate money to environmental organisations, get involved in a community garden, buy carbon offsets or carpool. (B2)
- Regionals have higher concern on drought, water shortages and bushfires in line with expectation. They are less concerned about climate change, global warming, chemicals and pesticides, greenhouse gases, carbon emissions, the ozone layer, sea-level rise and nuclear power. (B1)
- Metro significantly more likely to catch public transport, ride bike/walk rather than drive. Regional is significantly higher on re-useable green bags at the supermarket, washing clothes in cold water, buying green cleaning products, having worm farm/ compost and growing their own food. (B2)

2.1.3. Waste

- Gen Z loves 'water' i.e. water in the environment.
- Gen Z is significantly less likely to feel that water running down the drain is wasted compared to other generations (57% vs. 79% of Baby Boomers)
- They are less annoyed by people wasting water than other generations but they get anxious when they see someone leave the tap running...with 71% needing hot long showers to escape and 50% singing through the experience. (C6)
- Baby Boomers hate waste and gets annoyed with water waste (C6) in fact 76% of them agree 'people who waste water really annoy me' compared to 72% of the total (E24)

2.2 Do they think about the water they use?

2.2.1. Use

- On average people report using the tap 9 times a day and flushing the toilet 5 times a day (E6)
- On average people report 17 touches of water a day per person (E6).

"I have never been through a day when I haven't used water, ever. I have a shower, I clean my teeth, I drink it, I wash the dishes in it... Water is a big part of our daily lives." In reality is likely underreported, given interviewees from our ethnographic studies were shocked at how subconsciously they reached for the tap, even when we forced them not to.

"It was really hard to not turn on a tap. I had to wrap a cloth or towel around the tap to stop me trying to turn it on... It's such a second nature thing and it was really hard to stop."

- Taps vary a little from 7 times (ACT) to 12 (TAS), but toilets are pretty consistent — 5 or 6 flushes a day (E6)
- Gen Z claim lower usage of taps — 7; other uses are consistent across generations
- WA waters the lawn most — average 1.5 times a week (E7)
- QLD very rarely waters the lawn — average 0.4 times a week (E7)
- Washing machines are consistently used 3 times a week across all the states
- Baby Boomers use washing machines a little less (2.5 times a week) compared to Gen Z and Gen X (both 3.9 times a week)
- As expected, families use washing machine more frequently than those without children — Young Families 4.6 times, Older Families 4.1 times compared to SINKs 2.0 times and DINKs 2.8 times.
- 35% agree they probably do leave the tap running — highest for Gen Y (43%), Young Family (42%), Low Literacy (37%)
- 34% agree they feel stressed about the amount of garden water they use — significantly higher for Gen Y (39%), Young Family (40%)

2.2.2. Needs

- 71% say they sometimes need a longer hot shower to relax (vs. 63% of Millennials and 31% of Baby Boomers) (C6)
- 50% like to sing in the shower (vs. 34% of Millennials and 8% of Baby Boomers) (C6)
- Gen Y — will brush teeth in the shower but will do half loads of washing when they need to. They love to play with it for leisure activities, to sing in the shower and to escape in the shower for personal time. Even 32% of the high literacy group (and 27% of all Gen Y) is sure there will always be a supply of water for households. (B2)

2.2.3. Water-efficient devices

- Gen Z has the least devices but the most shower timers, pool covers and spa baths (E8)
- Baby Boomers have more devices than the other generations but far fewer shower timers, pool covers and spas (E8)
- Regionals have more devices (E8); significantly more likely to have a dual flush toilet, trigger nozzle hose, rainwater tank, garden sprinkler, greywater diverter

2.2.4. Which of the following devices do you have?

- Regionals have more devices (E8); significantly more likely to have a dual flush toilet, trigger nozzle hose, rainwater tank, garden sprinkler, greywater diverter
- Baby Boomers have more devices than the other generations but far fewer shower timers, pool covers and spas (E8)
- Gen Z has the least devices but the most shower timers, pool covers and spa baths (E8)
- Rainwater Tanks (31%) and Aerator taps (22%) are especially low everywhere. (E8)
- Most (76%) have dual flush toilets; this is significantly higher for Baby Boomers (90%), Gen X (85%), Regional (80%) and lower for Gen Z (57%), Gen Y (63%). There are no significant differences by state.
- Showerheads — highest in SA (71%) and lowest in WA (54%) and ACT (50%). (E8)
- Trigger Nozzle — lowest in WA with 42% (E8)
- Front Loader Washers — highest in ACT (56%) and SA (55%), lowest in TAS (30%) and NSW (41%) (E8)
- Rainwater tank — highest in SA 57% and Lowest in WA (18%) and NSW (26%)
- Sprinkler — highest in SA (47%) and WA (42%) and lowest VIC (22%) and NSW (25%) (E8)
- Tap only 22% overall which seems low (E8)
- Pool covers — highest in WA (14%) (E8)
- Spa baths — highest in TAS (15%) and VIC (8%) (E8)

2.2.5. Comparing their use to neighbours

- Only 13% of total think they use more water than their neighbours; 41% think they use the same and 46% less.

"I'd say we're in the upper percentile of people who are good with water... But overall, washing up I leave the tap running rather than filling the sink with water. I'm not sure which one's more efficient. Probably filling the sink is? There are some things I could do to be better about it."

- Baby Boomers more likely to think they use less (56%) compared to Gen Z (28%) and Gen Y (40%)
- Metro and regional suggest they use the same or less as neighbours versus more (E19).
- This is consistent across state and metro/ regional
- Overall 50% think they save water mindfully the same as neighbours with 45% thinking they do better — this is consistent whether they are metro or regional (E20)

"We think we're pretty good with water anyway... But probably the one thing that we could cut back on is showers. I think we probably have really long showers."

- Significantly more likely to think they are better at saving water than their neighbours — NSW (50%), Baby Boomers (51%), High Literacy (52%)
- 11% of Gen Z think they are worse than their neighbours (sig higher than other groups)

2.2.6. Alternative water sources

- 45% have ever used greywater in total; Older you get the more likely you are to use it — 53% for Baby Boomers (F7) Frequency of use is similar across those who have used. (F8)

"It's that second life for me that the water goes to something else rather than just down the drain. It's kind of like it ends its life in a good place, going into the soil, that's nice."

- 38% of people would likely or very likely use greywater — most more likely than not with many (37%) on the fence (F9)
- 43% of Gen X are likely/very likely to use greywater (F9)
- Only 36% of Gen Y have ever used greywater (F7)
- Regional are big users of greywater; 56% have ever used vs. 39% of Metro (F7)
- States more likely to use greywater are ACT (53%), SA (52%) and QLD (47%); least likely are TAS (33%) and WA (36%). (F7)
- Marginally more NSW (72) use at least occasionally compared to only 58% in SA (F8)
- 38% said they would be likely/very likely to drink recycled water (F11)
- Likely / very likely to drink recycled water — highest for NSW (43%) and WA (42%); lowest for TAS (24%) and VIC (31%). (F11)
- Baby Boomers (42%), then Gen X (37%) then Gen Y (35%) then Gen Z (32%) — older more likely (F11)
- Metro regional similar views — 37% vs 38% (F11)

Column %	Ever used grey water (F7)	Use grey water occasionally, somewhat/very frequently (F8)
ACT	53	base too small
SA	52	65
QLD	47	58
VIC	44	63
NSW	44	72
WA	36	68
TAS	33	base too small

	Ever used grey water (F7)	Use grey water occasionally, somewhat/very frequently (F8)
Gen Z	38	64
Gen Y	36	68
Gen X	48	66
BB	53	63
Metro	56	66
Regional	39	64

2.2.7. Attitudes to saving water

Why are people choosing not to save water?

- Water-saving measures are too expensive is the top reason for all groups except Gen Z where 'I don't think anything I do will make a difference' is slightly ahead
- Gen X — of those not saving water they think water saving is too expensive (65% significantly higher than other generations) (E10)

"If all of a sudden people knew that they had to pay more for it... they'd see water drop by anywhere between 5-10% within the first 3-6 months, I reckon."

- Gen X is motivated to use less water through common sense (86%), seems the right thing to do (81%), wanting to do their bit (75%) and saving money (71%) (E9)
- Compared to other generations, more Gen Y thinks water is cheap (E10)
- Gen Y and Gen X more likely (than Gen Z/ Baby Boomers) to think saving water is inconvenient (E10)
- Of the Gen Z that are not using less water, 49% think what they do won't make a difference, ahead of water-saving being expensive (47%) and inconvenient (47%). They are more likely than older groups to say that they don't know how to save it (41%) (E10)
- Gen Z is influenced to use less water by saving money and the environment. 29% said they were influenced by an ad they saw — higher than other generations (E9)
- Baby Boomers the group most likely to say saving water is not important (40%) and the least likely to say they don't know how to do it (only 25% compared to 41% for Gen Z and Gen Y)
- Of the Baby Boomers who are not using less water, expense is the main reason, but they are more likely to say that they don't think saving water is important than other generations
- 50% agree that 'while I know how to save water, I find it hard sometimes'. This is higher for Gen Z (70%), Gen Y (60%), Metro (53%), Live with Family (62%), Young Family (61%, Low Literacy (55%)
- 54% of total agree they are doing all they can to save water; significantly higher for Baby Boomers (67%) than Gen Z (40%) and for High Water Literacy (62%) than Low Water Literacy (48%)
- 69% of Baby Boomers say they are doing all they can to save water; significantly higher than other groups (E24)

2.2.8. Reflection

- Overall, everyone agrees householders have an impact on water used in urban areas, waterways and coastal bays (77%+) (D1)
- 63% agree they could probably save more water than they do; this is significantly higher for Gen Z (76%) and Gen Y (2%) and lower for Baby Boomers (52%). Those living with family and Young Families more likely to agree (72% and 70% resp)
- 69% agree that 'if the taps in my household suddenly stopped working, I'd freak out'; this is highest for Gen Z (77%). Significantly lower for Regional (64% vs. 72% for Metro) and SA (60%)

"We've just taken it all for granted, just like you do with anything that feels like it's endless."

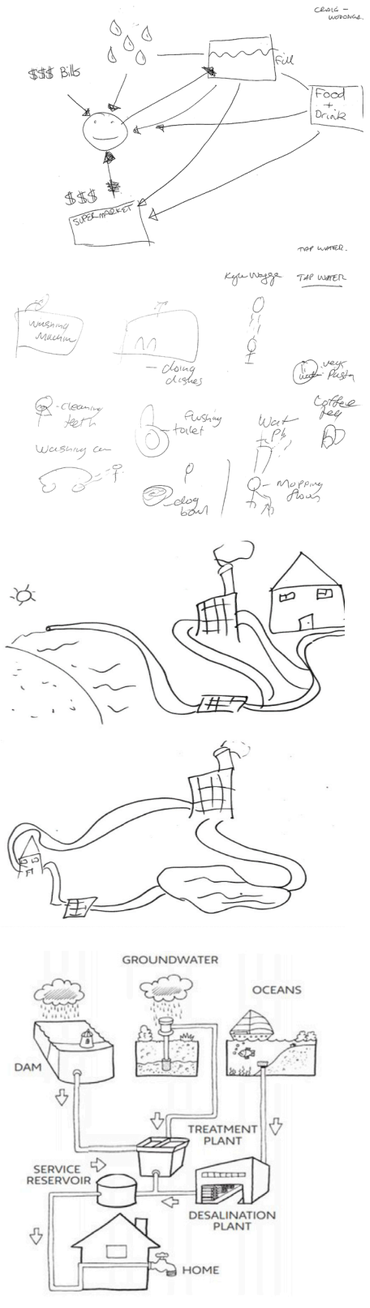
"In third world countries like India they have a short supply of water, and some people have wells... some people won't even have water for days... some of them will be drinking dirty water because that's all they've got... We take it for granted here and I think kids these days take it for granted especially. Having running water at our fingertips."

2.3. Do they know where their water comes from?

2.3.1. Learning about Water

- In general, the last time people learned about the water cycle was in primary school or high school (23% primary school and 35% high school)
- 23% of the population recall primary school being the last time they heard about it; this is marginally higher in QLD (27%), VIC (25%) and WA (25%)
- 35% remembered water education being taught in high school; this was higher in ACT (71%) and marginally higher in SA (41% and WA (38%) (D7)
- Gen Z highest for primary school (36%) and high school (48%), indicating how teaching has changed over time as the importance of the environment has been realised.
- Overall 9% claim TAFE/UNI; highest for Gen Y (14%) are the only ones who claim TAFE/ Uni but this makes sense given they would have been in education during climate change, global warming introductory times (D7)
- 27% of Baby Boomers claim to have never been taught about the cycle so where did they get their info? They are the group with the highest water literacy. (D7)

Examples of drawings we were provided with by our ethnographic interviewees when asked to show us where their household water comes from.



2.3.2. Water Literacy

- Only 64% of people agree they know where their household drinking water comes from (D1)
- 45% don't think about where their tap water comes from (vs. 30% of Millennials and 7% of Baby Boomers) (C6)
- 42% everyone thinks they are somewhat knowledgeable; this is a little higher in WA (46%) and SA (46%)
- 29% say they are very knowledgeable/ knowledgeable — highest in ACT (45%) and lowest in TAS (15%); Regional marginally higher than Metro (32% vs. 28%)
- 25% say not knowledgeable at all (E21); higher in TAS (38%) and VIC (30%)
- 71% vs 54% of regional people claim to know where water comes from; similar proportions think water is finite (45% for Metro and 41% for Regional). (D1)
- Regional think they are marginally more knowledgeable — 32% very knowledgeable/ knowledgeable vs. 28% Metro. 42% of each say they are somewhat knowledgeable (E21)
- 45% of people think they have changed their thoughts on household supply as a result of the new info (E22)
- 62% of Gen Z and 56% of Gen Y especially (E22)
- 47% of metro say yes it changed their minds and 40% of regional (E22)

2.3.3. Water Knowledge

- 45% of the total know their water catchment — this varies considerably by generation: Gen Z (17%), Gen Y (31%), Gen X (46%), Baby Boomers (60%).
- Regional are also more likely to know their water catchment (55% vs. 40% for Metro) as are high Water Literate (74%) vs. 21% for Low Literacy
- 53% in NSW know their water catchment but less than 40% in VIC, WA and TAS. (D1)
- 30% of total think bathroom and laundry water is barely treated before going back into waterways. This is highest for Gen Y (38%). It's consistent across states (D1)

"Thought that Dubbo had an endless water supply because it's coming from the bore. I don't know. Is it endless? All these towns around Dubbo are on water restrictions and we're not. I don't think I can ever remember us being on water restrictions"

- 25% of people think stormwater is treated before entering the waterways (roads and roofs) (D1)
- 24% of total agree domestic wastewater and stormwater are carried through the same pipes. This is highest for Gen Y (31%) and lowest for Baby Boomers (19%) (D1)
- Gen Y is significantly more likely to agree:
- Wastewater from domestic bathrooms and laundries receives little or no treatment before entering waterways
- Stormwater from roofs and roads is treated to remove pollutants before entering the waterways
- Domestic wastewater and stormwater are carried through the same pipes (odd since they are so keen on environmental issues — they really need more water knowledge (D1)
- 44% of people think water is finite yet 23% are sure there will always be a supply of water made available to households (C6)

2.3.4. High water literacy

- Overall 45% classed as High Literacy. By State — ACT (51%), SA (50%), NSW (49%), QLD (49%), VIC (40%), TAS (36%), WA (36%)
- High water literacy leads to marginally greater concern for drought, shortages, dam levels (B1)
- High water literacy also marginally more concerned about animal extinctions and habitats destruction (B1)
- High Literacy are significantly higher on all the greener activities except: switching appliances off at the wall, voting in elections based on environmental policies, buying products endorsed as having a low impact on the environment, Eating vegetarian, riding a bike or walking instead of driving, donating money to environmental organisations, buying carbon offsets, getting involved in a community garden — (pretty much reflects the Baby Boomers high water literacy profile — as would expect as Baby Boomers account for 48% of High Literacy group) (B2)
- Older has better water literacy (D1D2)
- Gen X and Baby Boomers both have higher water literacy and as a result include drought, shortages, dam levels in their top 8 concerns (only 53% and 35% low water literacy respectively) (B1)
- Regional has higher water literacy 52% vs. 41% for Metro (D1D2)
- 65% Highly Literate Regional think they are doing all they can (E24)
- High Literacy think they use less than Low Literacy (52% vs. 41%)

2.3.5. Low water literacy

- Gen Z and Gen Y have low water literacy (86/66%) and note climate change, global warming, gas as key concerns (B1)
- On par or mar with Low literacy for being concerned about climate change, global warming, greenhouse gases, sea-level rise (B1)
- Metro has lower literacy 59% vs. 48% for Regional (D1D2)
- 35% agree they probably do leave the tap running — highest for Gen Y (43%), Young Family (42%), Low Literacy (37%)

2.4. Is there a generation gap in water knowledge and behaviour?

2.4.1 Generational Gap

- Baby Boomers have higher water literacy (65% compared to 14% Gen Z, 34% Gen Y and 47% Gen X) and as a result include drought, shortages, dam levels in their top concerns (B1)
- Baby Boomers are much more knowledgeable on many water topics — their water catchment, where their household drinking water comes from and the impact of households on water, but lower knowledge of how water is treated or what goes in the same pipes (D1)
- Baby boomers (57%), from QLD (50%), have been directly affected by water shortages (51%) and have high water literacy (51%)
- Personal experience of water shortage is linked to a greater appreciation of tap water being "precious" (51%, vs 34% who have no experience) (C4 / E2B)
- 49% of Gen X have been affected by shortages — compared to 24% of Z and 38% of Y (C4)
- Only 38% of Gen Y has been affected by shortages compared to 50% of Gen X and Baby Boomers. Gen Y would have been born in 1981 at earliest, been 10yrs at 1991 and 20yrs in 2001 (Unlikely to have been responsible for water living at home (C4).
- Gen Y significantly less likely to know where their drinking water comes from or what water catchment, they are in compared to older generations (D1)
- Gen Z's have the lowest water literacy of all generations (14% have "high water literacy", vs. 34% of Millennials and 65% of Baby Boomers)
- Only 24% of Z have been affected by shortages this makes sense since Gen Z would have been born during the Millennium drought at earliest (C4)
- Gen Z's are the ones most likely to take tap water for granted

2.4.2 Shortages

- While 52% are concerned about water shortages (B1), only 31% are concerned about water shortages in their local area (C2)

"When I turn the tap on there is always running water"

- Metro 29% Yes we are in restrictions Regional 23% Yes we are in restrictions (C1)
- Metro 57% Not in restrictions Regional 69% not in restrictions (C1)
- 53% of Baby Boomers have been affected by shortages — compared to 24% of Z and 38% of Y (C4)

2.4.2.1 Shortages by State/Region

– Water Shortage Concerns

- There is little difference between regional (57%) and Metro (51%) with regards to concerns about water shortages (C2).
- States in order of concern about water shortages: NSW, TAS, VIC, QLD, SA, ACT, WA. (C2)
- 51% in WA think they are on restrictions but are the least worried about shortages (C2)
- 60% in NSW are worried and 52% think they are on restrictions (C2)

– Is your Local Area under water restrictions?

- 27% of respondents said their local area was under water restrictions; Higher for Metro (29%) than Regional (23%) (C1)
- Metro 57% Not in restrictions Regional 69% not in restrictions (C1)
- More Metro Not sure (14% vs. 8% for Regional)

– Have you been personally affected by Water Shortages?

- 57% in QLD and 66% in ACT are sure they have (Vic at 48% and SA at 53%) (C4)
- 75% of WA and 60% of NSW says No to being directly affected by water shortages (C4).
- 49% of Gen X and 53% Baby Boomers have been affected by shortages — compared to 24% of Gen Z and 38% of Gen Y — this makes sense since Gen Z would have been born during the Millennium drought at earliest and Gen Y would have been born in 1981 at earliest, been 10yrs at 1991 and 20yrs in 2001 (Unlikely to have been responsible for water living at home (C4).
- Regional more likely to have been directly affected by water shortages than Metro (53% vs. 39%) (C4)
- Metro more likely to say no, they have not been directly affected — 56% compared to 44% for Regional (C4)

2.4.3. Sharing water knowledge with younger generations

- 73% Baby Boomers discuss water-saving with kids vs 77% Gen X (D5)
- Gen X claim to discuss water-saving with kids 77% — highest of all generations (D5)
- Interestingly, Gen Y whilst 63% does less than the other generations which is interesting based on their seemingly green consciousness (D5). (NOTE: Some Millennials could consider their kids too young to discuss this)
- Overall 71% discuss with kids — older generations do more and marginally more regional Aussies do too (D5). Regional is 74% vs. 70% for Metro
- States with large enough base sizes: SA (82%), QLD (78%), WA (70%), NSW (69%), VIC (65%) discuss water-saving with kids (D5)
- High literacy more likely to discuss; 77% compared to 65% for low literacy

"My daughter went to the principal with her friend and said you need to introduce glass straws or non-plastic straws… My daughter is going to change the world."

"I think from this exercise they learnt that you should really not waste… my daughter was saying 'oh my god I spend so much time washing my face, doing this and doing that'… She knows that wasting water is bad and… as a community, we need to save water because everyone needs water specially to grow vegetables and things like that. She's old enough and she understands."

"I was rinsing my 4-yr. old's mouth out and the 2-yr. old turned the tap off while I was brushing… He turned it off because he realised that I'm not using it. So, it's good, even for a 2-yr. old, to be aware. I was really proud of him."

2.5. Would Australians abandon 'auto-pilot' for a 'relationship' with water?

2.5.1. Effects of knowledge

- Knowing the quantities of water used for everyday things can shock people into 'seeing' the tap water they currently don't see, or take for granted
- 60% are surprised by the Australian water usage facts; significantly lower for WA (46%) and SA (48%). Marginally higher for Gen Z (68%) and marginally lower for Baby Boomers (56%) (E12)
- Regional and Metro are equally surprised by Australian water usage facts (62% vs 60%) Regional/high lit — a little more surprised by the Australian water usage facts (E12)
- 30% of all respondents said they found the facts hard to believe (E12)
- 63% of total agree the information about average water use in Australian homes make people think more about how they use it. This is significantly higher for Gen Z and Gen Y (71% each) and lower for Gen X and Baby Boomers (55% each) (E12).
- In fact, Gen Z's and Y's are the most likely to feel that if they knew more about how tap water fits into the broader water cycle, they would be more mindful of their usage (62%, vs. 33% of Baby Boomers) (C6)

2.5.2. Effects of experience

- When we conducted an experiment to force people to experience their own personal water shortage, their eyes were opened to how much tap water they waste every day.

"I just realised I would usually just rinse, rinse, rinse, rinse, rinse… leave the tap on with enough pressure to shoot off the remnants on the plate… all that water pressure and volume it's just like wasting water."

"The next day, when we were done with it, I'd turn on a tap to wash my hands and I realised I used more water just washing my hands and face quickly than I did in the entirety of last night… In about one minute of just turning the tap on."

- Our interviewees were shocked at how subconsciously they reached for the tap, even when we forced them not to:

"It was really hard to not turn on a tap. I had to wrap a cloth or towel around the tap to stop me trying to turn it on… It's such a second nature thing and it was really hard to stop."

- 55% say Australians are addicted to turning on the tap — this is consistent across generation and state. Significantly more Highly Water Literate agree (62%) than Low Water Literacy (50%)

"It really makes you think how much water you're using because it's the quantity… When you turn on the tap you don't really know how much is just going out. But when you fill it up you're like, okay we get through this much and this much. You can really measure it."

- 57% were surprised to learn that the average toilet flushes 11L of water. Learning this made 54% want to reduce the amount they flush (E18)
- The image of flushing good, clean, drinking water down the toilet could disturb people enough to act:

"If I could visualize someone pouring 8 litres of Evian into a cistern again and again… someone going to the shop buying 8 litres of Evian water and then pouring it down the toilet… that visualization would be like, 'Oh how wasteful, that's a wasteful thing'."

2.5.3. Thinking about drinking water being flushed

- Baby Boomers thinks it less strange that toilet water is drinkable than other generations (E24)
- 72% agree it is strange that toilet water is drinkable; Baby Boomers a little lower (68%) as is ACT (58%) and SA (63%). Gen Z (78%) and Gen Y (76%) more likely to agree (E24)
- 71% agree 'it's wrong to use good drinking water for things like flushing the toilet' — lower agreement for Gen Z (64%), live with family (62%), SA (61%), QLD (64%) and Low Water Literacy (66%). Higher agreement in NSW (75%) and High literacy (76%)
- Those who live at home think it's less strange, anxious etc (E24)

2.5.4. Abandoning autopilot

- 53% of total think they can save more; with Low Literacy more likely to agree than High Literacy (56% vs. 49%) and Metro more likely to agree than Regional (54% vs. 49%)
- Metro a little more likely to think they can save more (54% for Metro and 49% for Regional). Highly Literate Regional people less likely to think they can do more (only 43%) (E12)
- Gen Z are significantly more likely to agree that they could save more water than they do (76%) and significantly less likely to agree they do all they can to save water (40%) (E24)
- Gen Z metro all think they can save more — especially the low literacy groups (E12)
- Gen Y agree that they could save more than they do (70%), that it is hard to save water, even though they know-how (60%) and that they sometimes leave the tap running (43%) — significantly higher on these than other generations (E24)

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