

ecopulseTM
2016 SPECIAL REPORT

All Wet?

How consumers perceive the coming water crisis,
how much they value water conservation –
in general and from the brands they buy –
and what it will take to change their behaviors



The age of water scarcity has begun.

Thanks to a perfect storm of unfortunate circumstances – namely climate change, weather patterns, population growth, mismanagement of resources and inadequate infrastructure – water scarcity is a growing reality around the globe. This is true especially in developing nations, where access to safe, clean drinking water is not a fact of life for everyone.

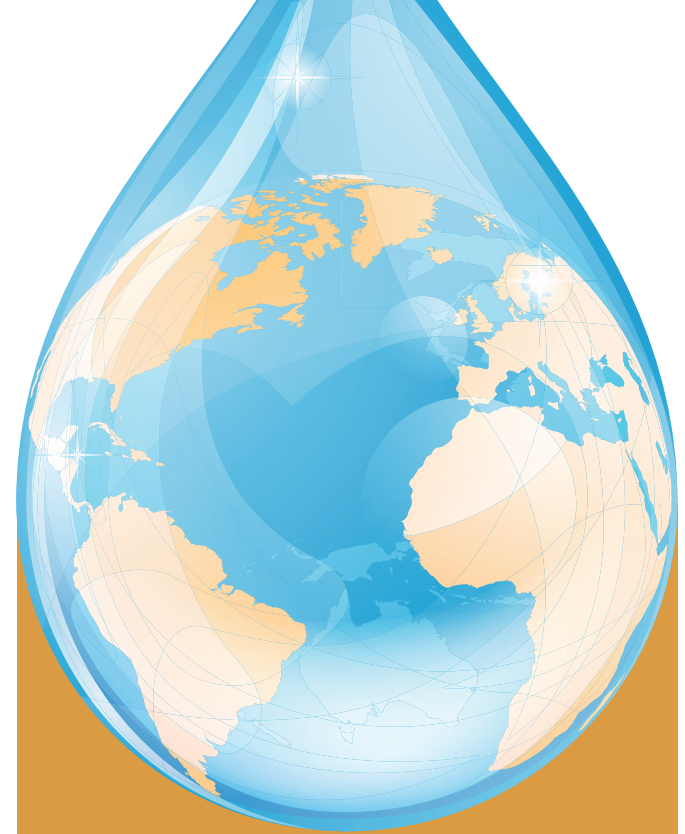
In industrial nations, water problems are highly localized, but still very real. In the United States, for example, water officials in 40 out of 50 states expect a water shortage of some kind in the next decade.¹ Rivers that supply major U.S. watersheds are starting to run dry. And beyond the unpredictable effects of climate and weather, crumbling infrastructure threatens delivery of clean water across the country.

Smart water use could help address these problems, but there are two major barriers to action: consumer awareness is low, and water is artificially cheap.

So how do you get people to use water wisely when there's no financial incentive to do so?

That's the burning question facing utilities, government agencies, environmental groups and manufacturers who make water-efficient products or who require water for production. (Which brings up another hot question: if consumers don't care about conserving water themselves, will they care when your company adopts water conservation as a core value?)

To get some answers – and to begin charting a course toward smarter water use – we polled 2,282 consumers in the United States and Canada to test their knowledge, perceptions and behaviors related to water conservation.



Methodology

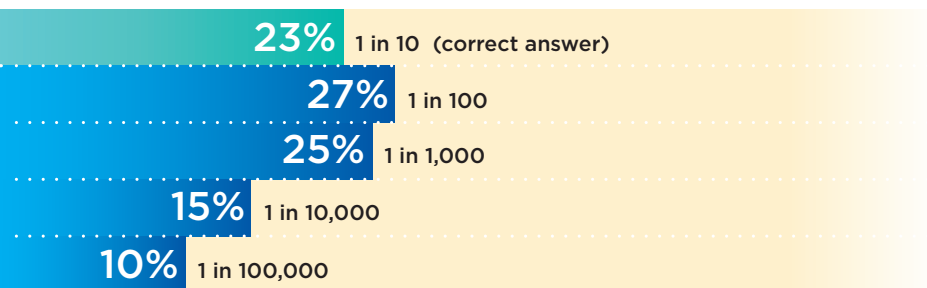
- Fielded May 2016
- Sample of 2,282 respondents (2,027 U.S. respondents and 255 Canadian respondents) from Survey Sampling International's global online panel of more than 11.5 million Internet users
- A mix of fixed-response alternative questions, Likert scale questions and a few open-response questions
- Sample stratified to mirror the U.S. and Canadian populations, using quotas for geography, age, gender, education and race; data were weighted slightly to match U.S. and Canadian population distributions
- Margin of error +/- 2.2%

First, do consumers know there's a crisis coming?

Not really – and that's not all that surprising. Despite the fact that we're moving into an era of increasing competition for water both locally and globally, consumers aren't receiving a unified, cohesive message about conservation. And in most places in the United States and Canada, water still comes out of the tap on demand, clean and ready to drink.

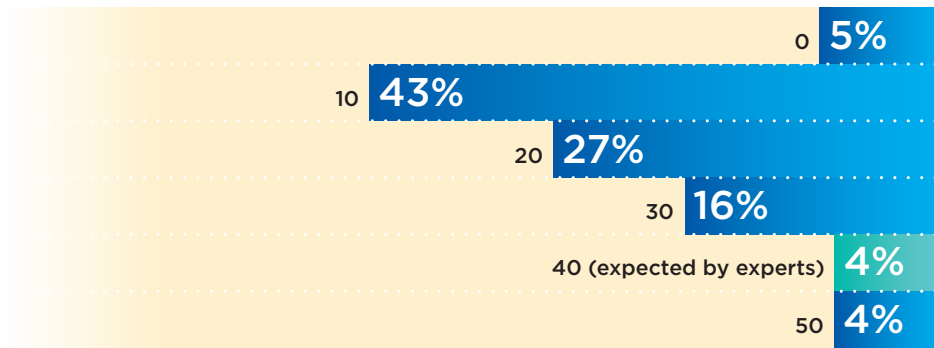
So water scarcity is not really on the consumer radar. According to the nonprofit Water.org, one out of every ten people in the world lacks access to safe water, but our respondents drastically underestimated the number of people affected. Only 23% knew or guessed the correct answer. Only 23% knew or guessed the correct answer. Only 23% knew or guessed the correct answer.

Access to clean drinking water is a problem in many countries. How many of the world's people lack access to clean water? (Please offer your best guess if you don't know.)



And knowledge of what was going on in their own back yards wasn't any more accurate. When we asked them to guess how many states or provinces would be affected by water shortages in the coming decade, they underestimated substantially.

How many American states do you think are likely to experience some kind of water shortage within the next 10 years?*

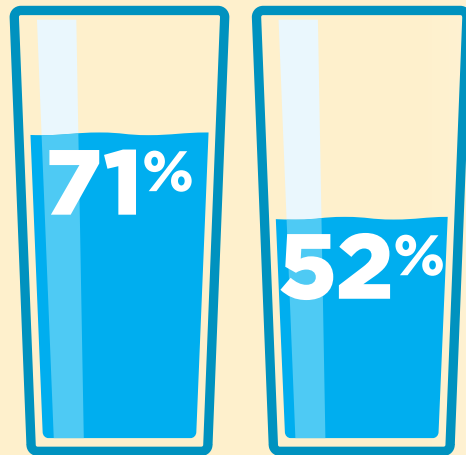


**American respondents only*

Canadian respondents were also unjustifiably optimistic. A majority (53%) guessed two or fewer provinces would experience water shortages over the next ten years, despite the fact that three provinces are experiencing moderate to severe drought in 2016 alone.²

Most consumers don't feel water shortage personally.

And this is perhaps even more important than their knowledge about water issues.

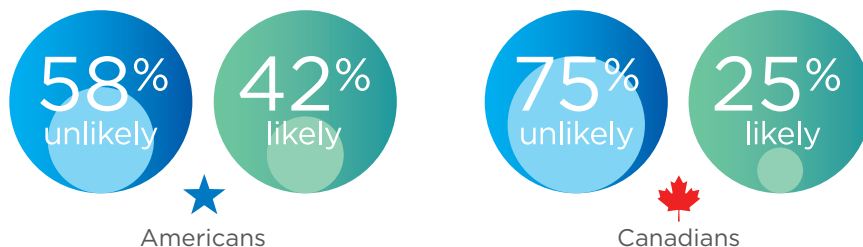


71% said they've never been affected by a water quality or scarcity problem

52% said they don't live in a water-constrained area

So when we asked them about a recent water crisis in Brazil, it's not surprising that most didn't believe such a thing could happen to them. (Canadians, as it happens, were significantly less likely than Americans to think a similar crisis could unfold in their own country.)

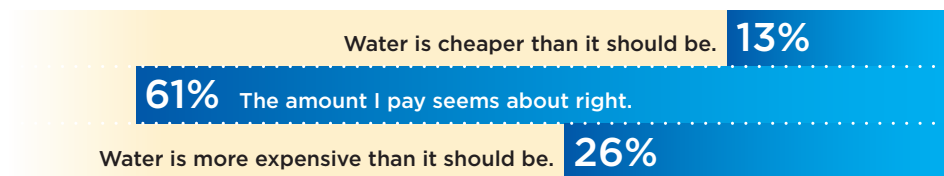
In 2015, Sao Paulo, Brazil, experienced a severe drought. Residents were told they could only have full access to clean drinking water two days per week, with restricted access the rest of the week. How likely do you think it is that a similar situation could happen in a city in the United States/Canada?



The distance that consumers feel from scarcity is reflected directly in how they perceive water's value. (Another major factor, no doubt, is a long history of government subsidies that mask the true cost of delivering clean water.)

The truth is that although potable water is what keeps them alive every single day, both Americans and Canadians pay less than a penny, on average, for each gallon of it they consume.³ So we asked:

How do you feel about your current water bill relative to the value of water in your everyday life?

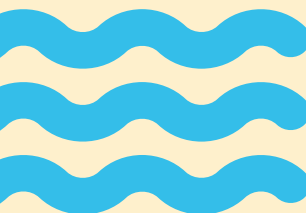


One in four, in other words, actually thought their water bills were too high relative to the value they were getting, and the majority felt water's price was on the mark. Only a small fraction recognized that the price of water is extraordinarily cheap for the value.

This dissonance may well be the most critical barrier to adopting conservation habits and purchasing water-efficient products.

But there's some good news ...

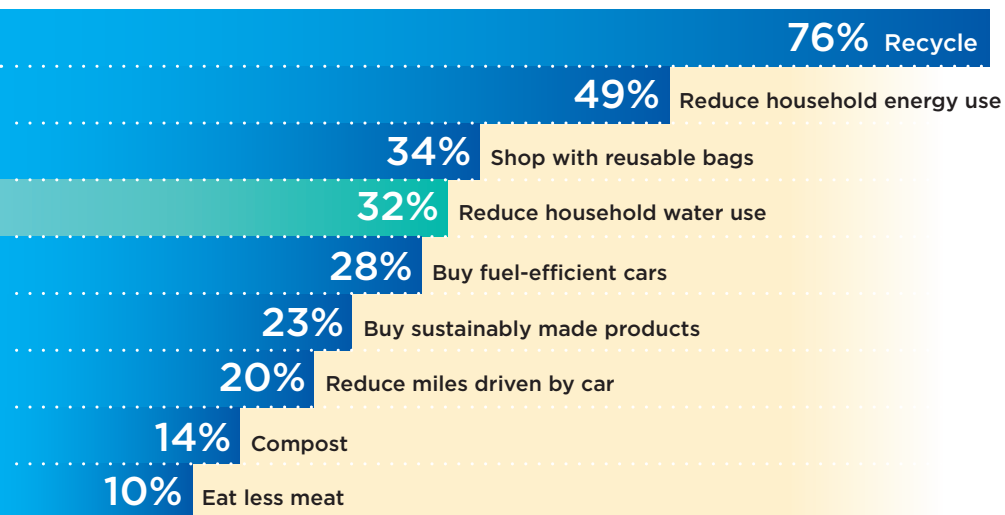
Even though their awareness of water scarcity issues is low – along with their perceptions of water's value – consumers still think conserving water is a good idea. (This dovetails with our past Pulse™ research, where we've consistently found consumers don't like to waste, and they do like the idea of “smart” consumption, which appeals to their self-esteem.)



63% of respondents said they'd like to cut back on the amount of water they use all the time

Before we started probing deeply on water issues in our survey, we asked a question to gauge how important water conservation was to respondents relative to other environmental activities.

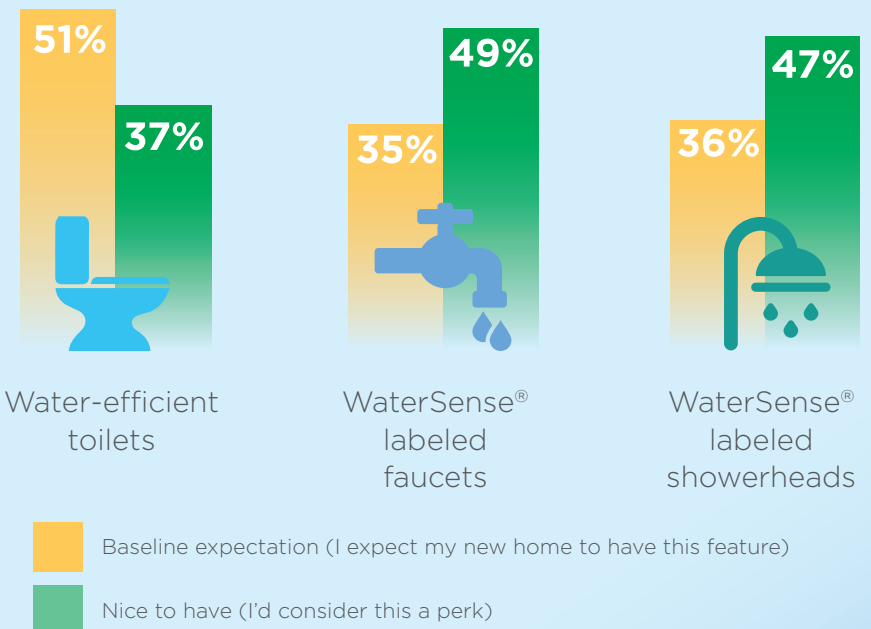
Choose the three most important things you should do to reduce your environmental impact.



Nearly a third of respondents placed water conservation in their top three activities, although it effectively tied for third place with “shopping with reusable bags,” an activity that has a small impact relative to other items on the list.

Do consumers expect their new homes to have water-saving features?

Of those planning to buy or build a home in the next two years, a majority felt water-efficient toilets were a baseline home feature. But water-saving showerheads and faucets were seen as perks, not must-haves.

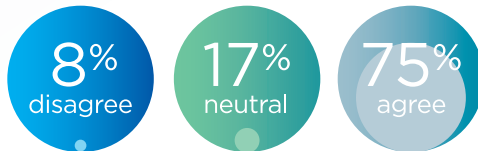


For comparison, ENERGY STAR® certified appliances and HVAC units were also considered baseline features by the majority; LED lighting and GREENGUARD certified flooring were considered perks.

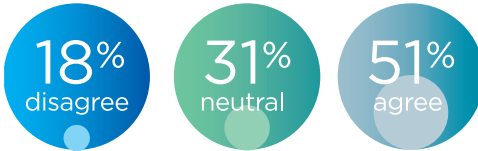
Consumers do show a sense of community when it comes to water usage.

More encouraging news: consumers show considerable prosocial sentiment about water, and they seem to trust the stories presented to the public about shortages. We asked them to rate their agreement or disagreement with several statements:

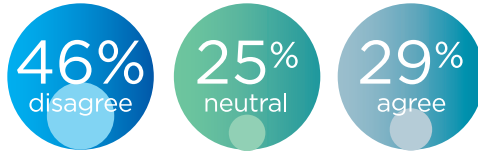
I should reduce my water use when my area is experiencing a lack of rainfall.



It's unethical for Americans to use as much water as they want when other countries have shortages.



I should be able to use as much water as I want, as long as I pay for it.



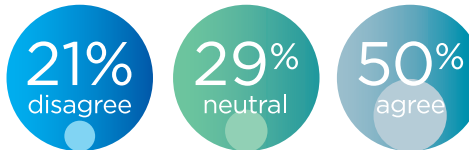
Media coverage of water shortages is exaggerated.



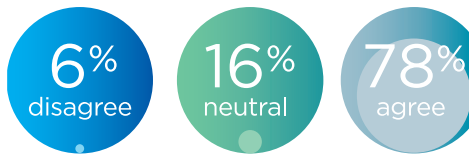
We also probed their feelings on the recent drinking-water catastrophe in Flint, Michigan. You may recall that respondents had a hard time believing a serious Brazil-type water shortage could affect them, but they were more inclined to see themselves in the victims of Flint. (And they're right: a *USA Today Network* investigation in 2016 revealed potentially unsafe levels of lead in drinking water systems in all 50 states, recorded over the last four years.⁴)

In 2015, a national scandal emerged in Flint, Michigan, when it became public knowledge that city officials had switched water sources to save money, and the city's drinking water had become contaminated with high levels of lead. How much do you agree or disagree with the following statements?

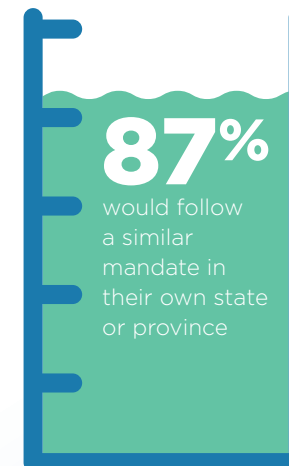
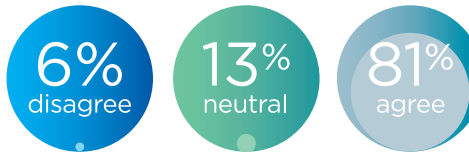
I think a crisis like Flint's could happen in my community.



Spending money on infrastructure is important to prevent a crisis like Flint's.



It's the government's duty to make sure water is safe to drink.

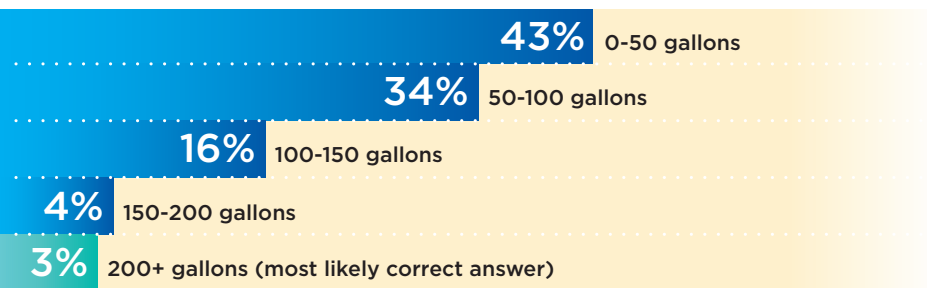


But awareness about personal water usage is low.

Americans use, on average, at least 100 gallons of water per person per day⁵ (much more, actually, if you count their total water footprint, including diet⁶). Canadians use slightly less at the tap, but also have a large overall water footprint relative to the rest of the globe.⁷ The average household in both countries consists of about 2.5 people.^{8,9} That amounts to an awful lot of water.

But only 3% of consumers guessed in that ballpark; the rest underestimated. While some households may be small and some people genuinely conservation-minded, we suspect most simply have no idea how much they're using.

On average, how many gallons of water do you think your household uses a day (while bathing/showering, cooking, washing clothes, watering the lawn, etc.)? Please offer your best guess if you don't know.



This fundamental misunderstanding makes it difficult to communicate the effectiveness of certain conservation activities. For example, we asked respondents how often they simply let the water run as they brush their teeth rather than turning it off: 20% said they let the water run every day, 13% once or twice a week, and 27% occasionally. That's a total of 60% who admitted they wasted water.

We then asked them how much water they thought they could save per year if they just turned off the tap while brushing. (That number for most people is between one and two thousand gallons.¹⁰) Most respondents again underestimated by a wide margin. *More than three out of four thought it was a very small amount of water – a full third of respondents thought it would save only 10 gallons.*



Only
20%

of consumers know that flushing the toilet is the biggest water guzzler in the average home¹¹

93%

of consumers think they use the same amount as or less water than their neighbors

But maybe the second stat isn't all delusion: the 48% who speculated that they use less water than their neighbors also reported more water conservation activities than average. They were less likely than average to water their lawns and leave the water running while brushing their teeth.

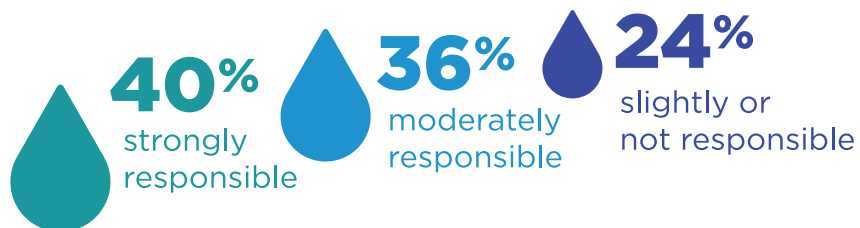
Even more profound: consumers lack a sense of personal responsibility to conserve water.

It's not just that consumers underestimate how much water they use – it's that they simply don't make the connection between the way they personally use water and the potential for a water crisis. In fact, they have a tough time connecting their own behaviors to their environmental impact in general. Note the eye-catching drop-off in numbers between the first and second questions we asked in our survey:

#1 Do you think the average person should be taking concrete steps to reduce his or her environmental impact?



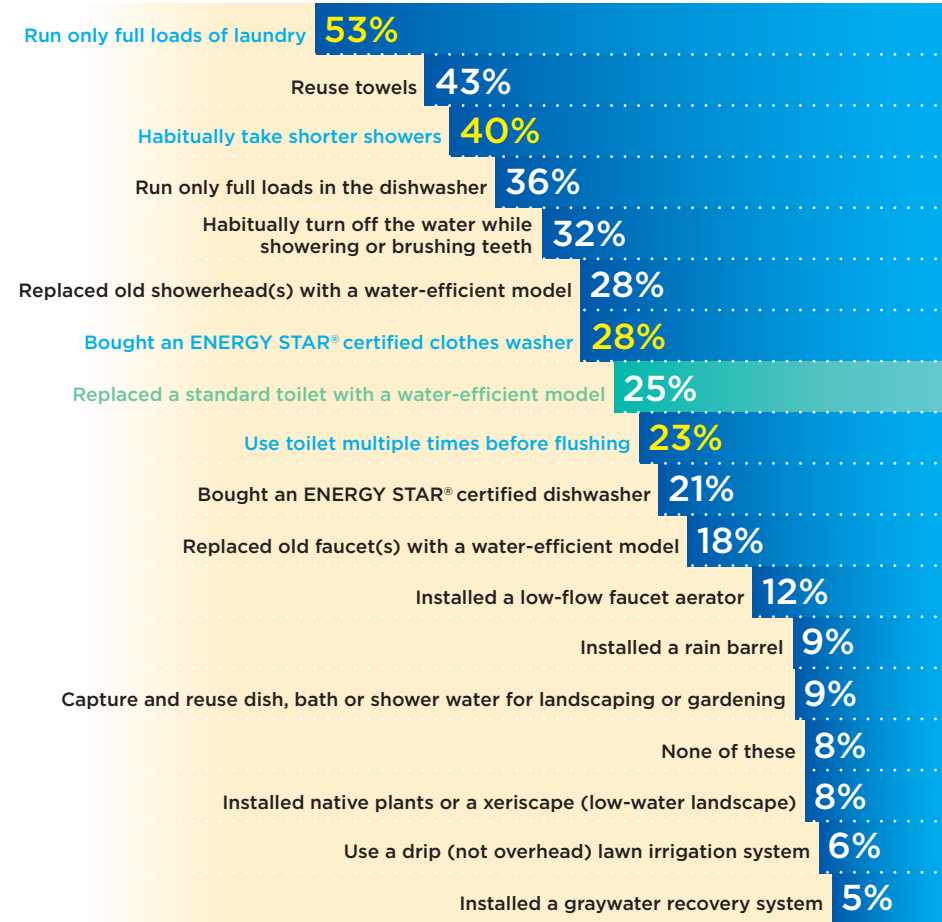
#2 How personally responsible do you feel to change your daily habits and purchase practices to positively impact the environment?



In other words, they think the average person should be doing something. *But only 40% see that average person when they look in the mirror.*

Perhaps this is why “develop new water-saving technologies” was their top choice for ways to prevent water shortages. And why even though 63% claimed to be interested in reducing their water use, only one water conservation activity was claimed by the majority (running only full loads of laundry).

Please tell us any steps you've taken to reduce water use at home. (Check all that apply.)

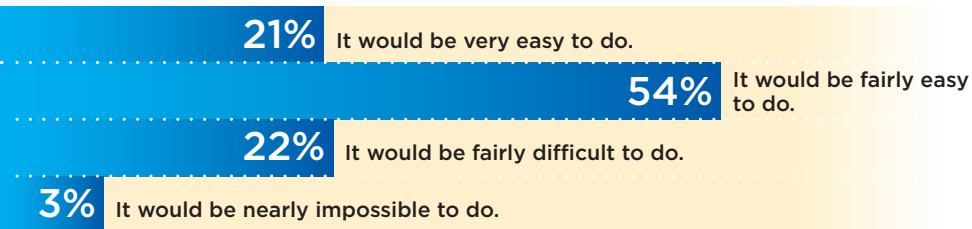


Each respondent chose an average of four activities. But as an example, only 11% checked *both* of the two highest-impact indoor activities (replacing a standard toilet with a water-efficient model *and* buying an ENERGY STAR certified clothes washer, which together would reduce indoor water use by 35%), and only 2% checked all five highest-impact indoor activities (the previous two plus taking shorter showers, running only full loads of clothes and using the toilet multiple times before flushing).¹² So there's ample room for improvement.

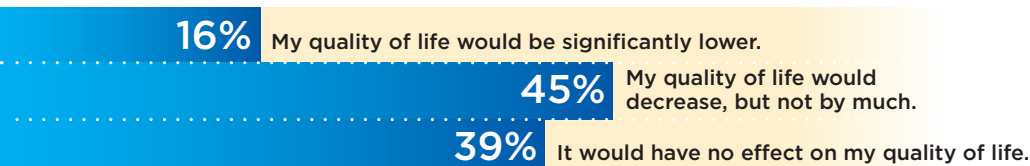
What would persuade them to change their behaviors?

While consumers acknowledge they could fairly easily reduce their household water usage by a third, most think that doing so would impact their quality of life:

If you had to cut your household's overall water use by a third – for example, by doing fewer laundry loads, installing water-saving features or reducing your shower time – how hard do you think that would be?

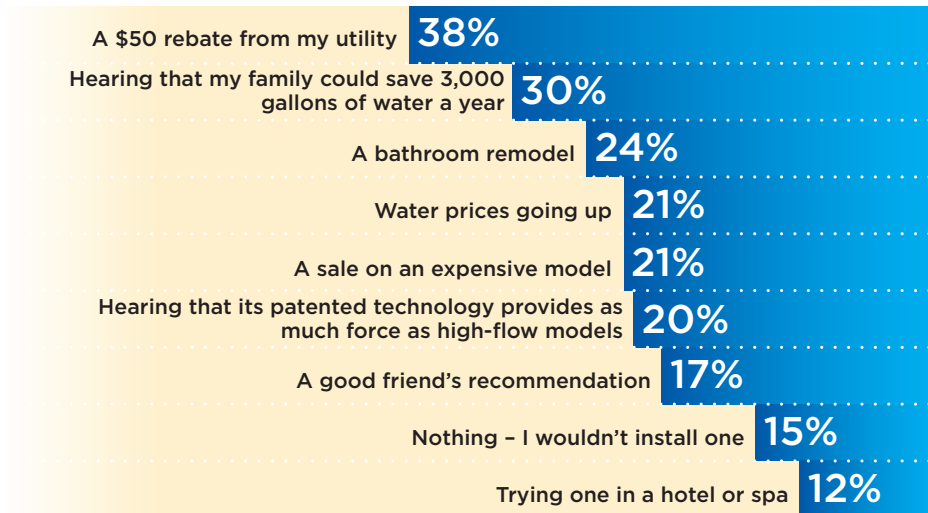


How would cutting your water use by a third affect the quality of your life? Choose the answer that most closely reflects your opinion.



And what would it take to nudge them toward change – at least theoretically? Here's what they said would move them to purchase a water-efficient showerhead; leading the way was a utility rebate that would cover part of the cost.

Which of these things might influence you to install a water-efficient showerhead?



Are they happy with water-efficient products?

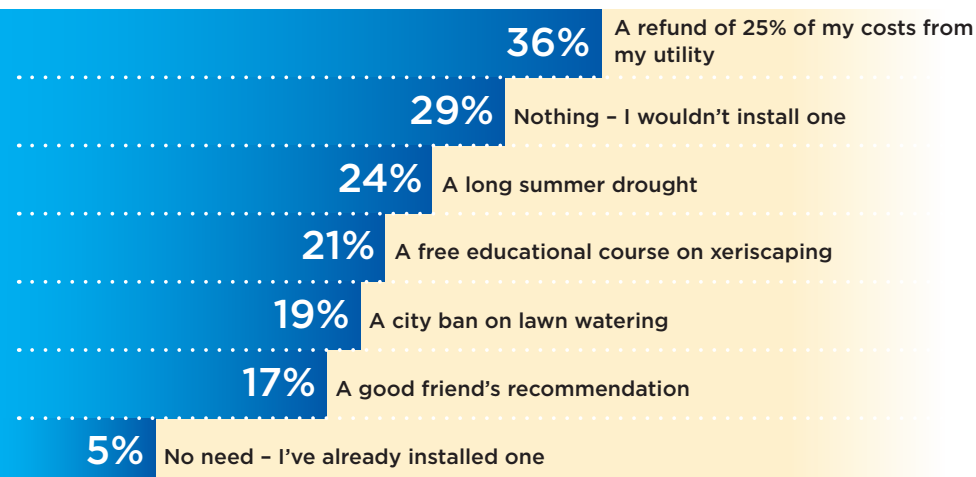
Note for manufacturers and marketers: about one in four consumers reported dissatisfaction with the performance of the outdoor water-saving devices they'd purchased (rain barrels and drip irrigation systems); one in five claimed to be dissatisfied with water-saving appliances, faucets, showerheads and toilets. Half of the owners of graywater systems (n=110) were dissatisfied with that purchase. *How do you plan to counteract their negative perceptions – before they share them with friends, via product reviews or on social media?*

Consumers claim to be most influenced by savings.

Whether the action is large or small, money seems to be foremost on their minds when it comes to conserving water. As we saw in the previous question about showerheads, savings came first, whether expressed in terms of money or avoiding waste.

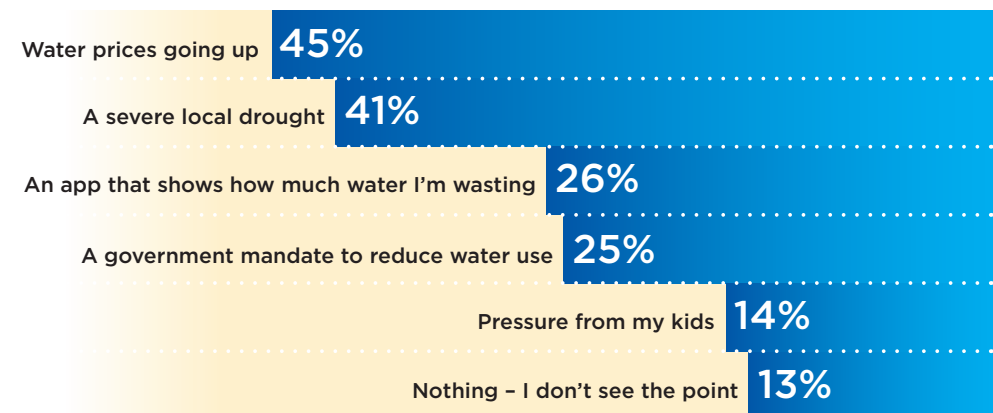
The same was true for a much bigger, more expensive project (xeriscaping) and one that wouldn't cost consumers a cent (turning off the water while they brush their teeth). Non-urgent motivations, such as social pressure or simple education, were perceived to be less influential than savings or an emergency situation (a severe drought).

A xeriscape is a landscape designed with native and low-water plants that thrive on the natural rainfall in your area, requiring little or no additional watering. Which of these things might influence you to replace your grass lawn with a xeriscape? (Check all that apply.)



Which of these things might influence you to turn off the water while you brush your teeth?

(Check all that apply.)



Interesting point: despite the fact that 87% say they'd reduce water use in the face of a government mandate (see p. 6), only 25% say that would influence them to turn off the tap while they brush their teeth. In other words, consumers say they're willing to voluntarily limit their water consumption if necessary - but they'd apparently pour their ration down the drain instead of using it for necessary household chores.

We doubt they even noticed the disconnect in their answers. *Although consumers say they're less influenced by straight-up education than cold, hard cash, we actually suspect that targeted education would be effective - there's an enormous knowledge gap that needs to be bridged.* Consumers simply haven't given much thought to their water use or its consequences.

What messaging moves them?

Beyond what consumers know and don't know, and what practical incentives appeal to them most, there are messages that resonate for them personally and emotionally. We asked respondents to identify the messaging that would most likely convince them to reduce their water use, choosing the three statements that most appealed to them out of eight total choices.

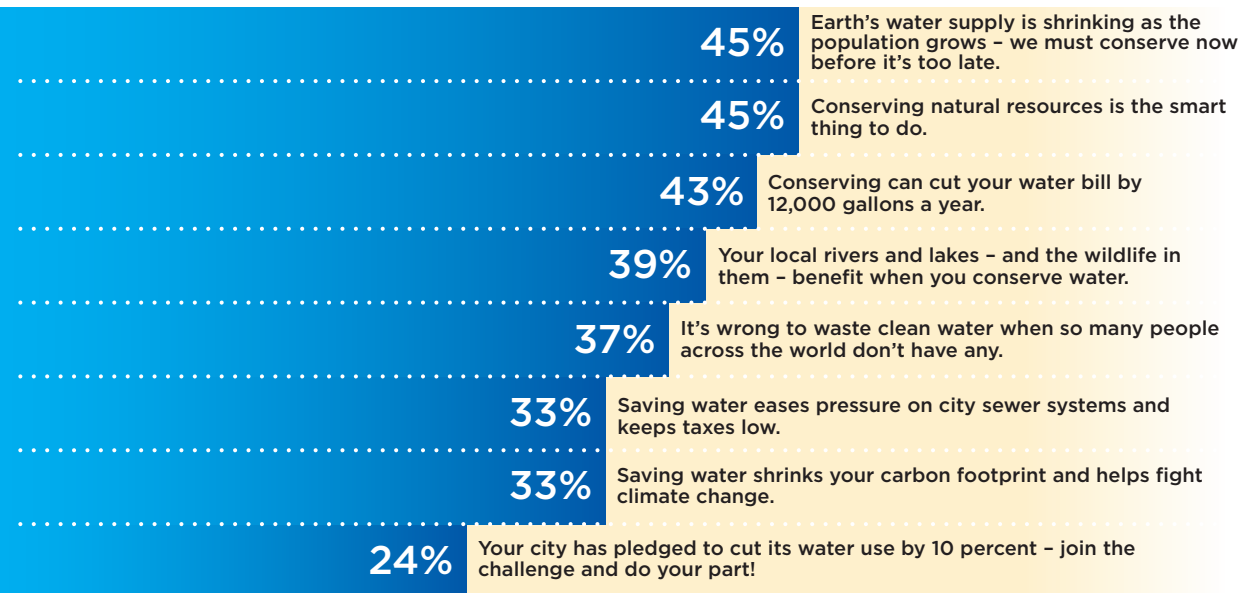
Even though consumers showed some prosocial sentiment when asked basic questions about water use, when it came to messaging that personally moved them, individual benefits trumped altruism.

The top three messages reflected, in order, urgency/scarcity, an appeal to self-esteem (smarts) and a savings message.

Note that we framed the savings message in terms of gallons rather than dollars and cents, because in the United States, 12,000 gallons amounts to around \$70 a year,¹³ which is probably less than you'd spend to achieve that level of savings. *As long as water remains priced well below value, far better to use terms that help consumers visualize what they're wasting rather than promising monetary benefits.*

An appeal referring to climate change worked only for a third of respondents. *We suspect many consumers don't connect water use with its larger environmental impact – they don't realize that water itself has a carbon footprint because of the energy it takes to treat and transport it.*

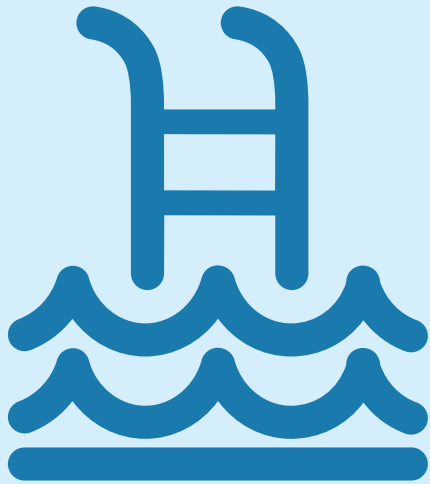
Finally, joining together with other community participants in a civic challenge held the least appeal of all.



Are Millennials all wet?

Much is made of marketing to Millennials as they age and become more influential consumers. Relative to water conservation, the important things to know are that they're the age group that makes up the largest share of home buyers,¹⁴ and they have a reputation for affinity for the environment and social causes.

In our survey, a strong majority of Millennials reported belief in human-caused climate change (68%), and they understood more than other groups that water is artificially cheap (22% vs. an average of 13%). Compared to older respondents, they also put significantly more weight on personal responsibility when it comes to preventing water shortages – only 48% thought we could wiggle around conserving by developing new technologies (vs. 62% of the overall sample). *But when it came to acting on their knowledge and beliefs, Millennials fizzled out.*



Millennials were the age group that reported the fewest water-conserving activities, significantly fewer than all other groups at just 3.4 (compare to the most active group, Seniors, at 5.1).

They lagged significantly behind Baby Boomers in their affinity for energy-efficient and water-efficient features in a new home, and they were the group most likely to water their lawns (54% do, vs. 45% of the overall sample). Also, despite the best efforts of their childhood TV icon Barney – who sang a song devoted to teaching kids not to let the water run while brushing their teeth – Millennials were the group most likely to do just that.

Surprisingly, Millennials even rejected community-minded messaging. They were significantly more likely than average to agree with the statement “I should be able to use as much water as I want, as long as I pay for it” (36% vs. 29%) and to say “media coverage of water shortages is exaggerated” (38% vs. 26%). They were the least likely age group to believe they should cut their water use when their area was experiencing drought (62% vs. 75%).

In a nutshell: Millennials have a bit more knowledge about global water issues than other age groups – but they aren't any savvier about their own personal water use. And their values may be less altruistic than advertised. As for taking action or demanding more water-efficient products, they're way behind other age cohorts.

Take the pro-environment reputation of this generation with a grain of salt and don't assume they're on board with water conservation – if you need to convince Millennials to buy efficient products or curtail their water use, you must pull the same emotional levers and use the same context-driven approach you would with anyone else.

Opinions on the importance of **corporate** water conservation vary – and seem to be influenced by what companies make.

Few respondents prioritized water conservation when given a long list of corporate social responsibility activities that might impact purchase decisions. But when we asked basically the same question (with a shorter list of options), using hypothetical examples from different industries, opinions shifted.

Company X is a global electronics manufacturer and one of the largest laptop makers in the world. Which activities would you most like to see Company X undertake?

Company Y is a global beverage brand that sells a billion servings of soda every day. Which activities would you most like to see Company Y undertake?

Company Z is one of the world's leading manufacturers of sinks, tubs and toilets. Which activities would you most like to see Company Z undertake?

For each company, we offered a list of eight CSR activities related to that industry – one of which was about water conservation – and asked consumers to rank their top choices.

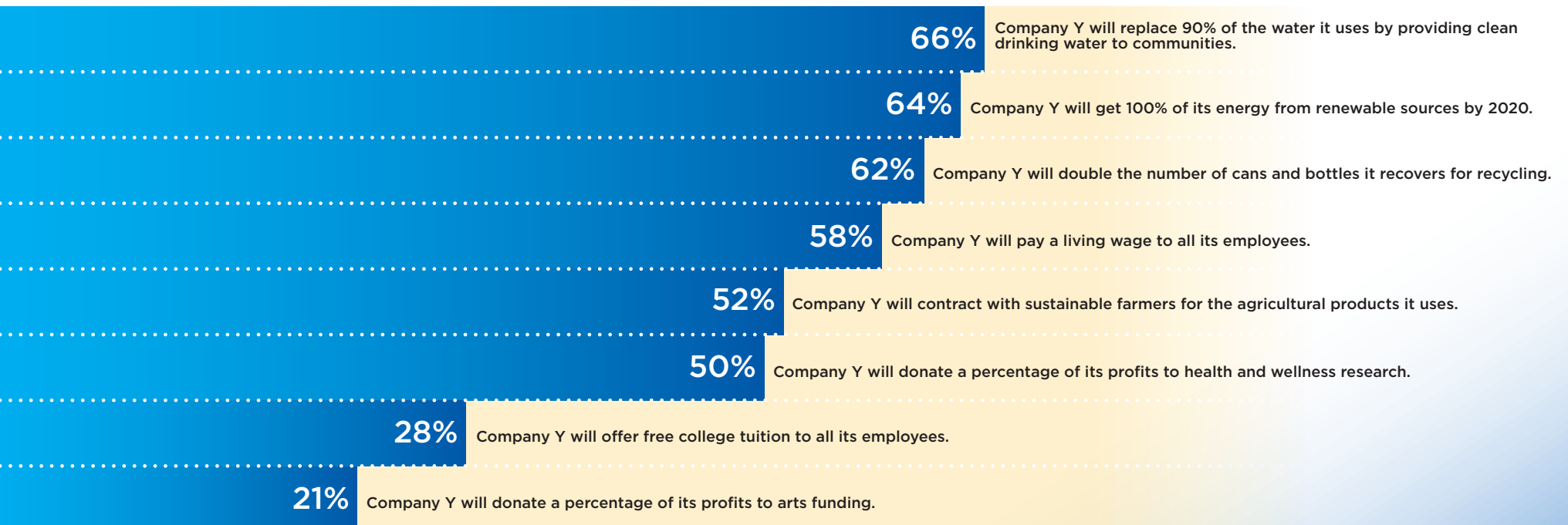
In all three examples, consumers ranked water efficiency or water conservation activities in their top three answers.

As an example, let's look at Company Y, where water conservation performed best of all. Note that Company Y's main business – beverages – is water-centric, which seemed to influence consumers to place increased importance on being water-responsible.

When given very specific contextual information, as we did in this survey, consumers gave water conservation high marks, with many deeming it even more important for the companies they buy from than for themselves personally. Maybe that's because they perceive it would be more effective when companies do it on a large scale. *Or perhaps because they'd just rather someone else did it.*

Company Y is a global beverage brand that sells a billion servings of soda every day. Which activities would you most like to see Company Y undertake?

Percentage indicates the number of consumers ranking this item in the top 4 of 8.



Our Recommendations

Getting consumers to conserve water is an uphill battle, and a significant part of making a real change lies in policy, programs and pricing. (From our survey, we certainly see the role utility rebates can play in encouraging water-efficient purchases and projects.)

But there's enormous potential for smart messaging, given the lack of good information and compelling arguments in all the places consumers might go to find them. At press time for this report, Googling the phrase "why should I conserve water?" yielded page after page of vague or overly simplistic information that made no compelling case for conservation on a personal level. Most sites offered some variation of "water is becoming scarce" or touted water bill savings. Given that most American and Canadian consumers pay only a few bucks every time they waste 1,000 gallons of water, *saving money is a lousy reason to make difficult or expensive changes in water consumption, and consumers will need a better one to get on board.*

This is where you can make headway instead:

Embrace education, but add urgency. Education alone is rarely a reliable marketing tool – but targeted education campaigns can be, as long as they're delivered in an unexpected, engaging way and emphasize timely action. There's already a water crisis going on – it's time consumers knew it, understood their part in it and felt a sense of urgency to do something about it.

Connect consumer conservation whenever possible to a real, local result – make it personal. "Water's getting scarce, so use less" is far too generic a message. If all the consumers in your area reduced their indoor water use by a third, what might happen? Would it keep

wastewater fees low or prevent a looming infrastructure crisis? Would it help keep local waterways clean and safe for recreational use or be a boon to local wildlife? How many tons of air pollution would it prevent by saving the energy that would have been used to treat and deliver that water? Find the facts that support your case and use them to make saving water feel concrete.

Talk gallons, not dollars. Help consumers visualize that gallon of water they're pouring down the drain when they mindlessly waste – and all the energy it takes to treat and deliver it. As a point of comparison, would they pour a gallon of milk down the drain for no good reason? Would they pour 12,000 gallons of milk down the drain every year? (An equivalent amount of water could be saved through efficiency actions.¹⁵) Appeal to consumers' natural distaste for waste to help them nip bad habits in the bud.

Tap consumers' sense of community. They may react more viscerally to messages about scarcity and waste, but consumers also demonstrate an awareness that pulling together can help prevent a crisis. We suspect an appeal to their altruistic sensibilities will make a strong impact over the long term.

If you're an organization committed to reducing your water footprint, talk about it loud and clear. Consumers value it, even if it's only because they want someone else to take responsibility.

If your goal is to get consumers to use less water, you must make water conservation feel real, personal, self- and community-affirming and, above all, necessary. Your success depends on it.

Endnotes

¹U.S. Government Accountability Office. (2014). *Freshwater: Supply concerns continue, and uncertainties complicate planning* (GAO-14-430). Retrieved from <http://www.gao.gov/products/GAO-14-430>

²North American Drought Monitor. (June 2016). Retrieved from <https://www.ncdc.noaa.gov/monitoring-content/temp-and-precip/drought/nadm/nadm-narr-201606.pdf>

³Global Water Intelligence. (2014). Graph: Average price for water in selected major countries. Water tariff survey. *Global Water Intelligence Magazine*, 15(9).

⁴Young, A., & Nichols, M. (2016, March 11). Beyond Flint: Excessive lead levels found in almost 2,000 water systems across all 50 states. *USA Today*. Retrieved from <http://www.usatoday.com/story/news/2016/03/11/nearly-2000-water-systems-fail-lead-tests/81220466/>

⁵U.S. Environmental Protection Agency. Indoor water use in the United States. WaterSense program website. Retrieved from <https://www3.epa.gov/watersense/pubs/indoor.html>

⁶National Geographic Society. Change the course: Water footprint calculator. Retrieved from <http://environment.nationalgeographic.com/environment/freshwater/change-the-course/water-footprint-calculator/>

⁷Environment and Climate Change Canada. (2016). Residential water use in Canada. Retrieved from <https://www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=7E808512-1>

⁸U.S. Census Bureau. (2010, April). Households and families, 2010: Census briefs (C2010BR-14). Retrieved from <https://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf>

⁹Statistics Canada. (2011). Census of population and statistics Canada (catalogue no. 98-313-XCB). Retrieved from <http://www.statcan.gc.ca/tables-tableaux/sum-som/I01/cst01/famil53a-eng.htm>

¹⁰See for instance, the EPA's estimate at <https://www3.epa.gov/watersense/kids/tap-off.html>

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about



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