



MIDCOAST
council



OUR WATER OUR FUTURE 2050

ENGAGEMENT OUTCOMES



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This report provides a summary of the input provided by the community into a draft long-term water strategy for the MidCoast local government area, gathered between July 2022 and April 2023. The input received has been considered alongside our own analysis to prepare *Our Water Our Future 2050*.



Photo: Participants at our first Our Water Our Future Community Group workshop.

Overview

As we embarked on the development of *Our Water Our Future 2050*, we went out to our community to find out what their values and sentiments were when it came to our water and sewerage services, what their vision was for the future of water in the region, and how they felt we should respond to the major water-related challenges we face.

We've received input from many people across the MidCoast, and this section provides an overview of what we did, heard and learned.

Engagement context

Access to clean water and safely managed sewerage services is essential to the prosperity of the MidCoast. It helps keep our population healthy and preserve our stunning natural environment. It supports our economy and sustains our recreational areas and facilities.

Around 90,000 people enjoy access to high quality water and sewerage services across the MidCoast every day. Our water and sewer networks expand across a large geographical area, from the major urban centres of Taree and Forster-Tuncurry to the smaller communities of Gloucester, Barrington, Bulahdelah, Stroud, Tea Gardens, Hawks Nest, and numerous locations between. We operate six water supply schemes and provide around 9 billion litres of drinking water every year. We operate 14 sewage treatment plants and four recycled water schemes, reusing around 25% of our wastewater annually to irrigate farmland and open spaces.

However, with our population predicted to grow by around 42% over the next 30 years, we know our water and sewerage services are going to come under increasing pressure. Our water supplies are especially at risk, with water security already an existing challenge in the region that will only be exacerbated by population growth and the unpredictable nature of climate change.

Our Water Our Future 2050 is a long-term strategic plan for the sustainable and affordable delivery of water and sewerage services in the MidCoast over the next 30 years. It sets a clear path for us to navigate the challenges we face and continue providing high quality services to our community. The strategy has been developed with input from community members, business representatives, regulators, Council staff and others.

Goals of the engagement

The goals were to:

- Raise community awareness of the major water-related challenges we face on the MidCoast
- Gain community input into the solutions proposed to address these challenges
- Better understand the community's values and sentiments when it comes to our water and sewerage services and the future of water in the region
- Increase community understanding of water management.

About *Our Water Our Future 2050*

Between July 2022 and April 2023, we asked our community to consider the major water-related challenges we face on the MidCoast and how they would like to see us address these challenges. We also asked people what their values and sentiments were when it came to the future of water in the region and what was most important to them about our water and sewerage services. The input we received has helped us prepare our draft long-term water strategy, *Our Water Our Future 2050*.

The draft strategy will be placed on public exhibition to allow the community to provide feedback that will inform the final strategy. Once adopted by Council, this plan will guide our activities until 2050, as we continue to provide safe and secure water and sewerage services to our community in the face of a changing climate and growing population.

What we heard

The following is a summary of the input we received from the community into our draft long-term water strategy between June 2022 and April 2023.

We sought input from a wide range of stakeholders, including community members, students, business representatives, regulators, social service providers, tourism operators, commercial fishermen and more.



Photo: Capturing feedback at one of our workshops.

Key insights

We gathered six key insights into what our community wants in relation to the future of water on the MidCoast.

Key insight #1

Off-stream storage dams are the preferred solution to increase water security in the MidCoast.

Off-stream storage dams were the preferred solution to address water security issues in the region among our workshop participants and respondents to our second phase of online engagement.

More than 70% of respondents preferred building an off-stream storage dam over a desalination plant to increase the water security of the Manning water supply scheme. Close to 75% of respondents preferred building off-stream storage dams to increase water security in Gloucester and Bulahdelah, rather than connecting these areas to the Manning scheme via pipelines and pumps.

The majority of workshop participants told us that off-stream storage dams were the preferred solution to increase water security in the region because they had the lowest combined construction and operating cost, utilised existing infrastructure, and were a familiar and low risk technology. They also liked that the dams could potentially generate renewable energy through hydropower and floating solar panels. It was suggested we design the dams so their storage capacities could be increased to accommodate population growth beyond 2050.

There were questions about the size and locations of the dams, and concerns about potential environmental impacts during construction, but there was greater concern for the comparatively higher costs and energy use associated with operating a desalination plant.

Despite this, we heard that solutions such as a desalination plant and purified recycled water (PRW) should be considered in the longer-term because they did not rely on rainfall, which could become increasingly important if we were to face longer, harsher droughts. It was suggested that a desalination plant could potentially be designed to supply both the MidCoast and Port Macquarie-Hastings local government areas, which would allow the cost of building and operating the plant to be shared across the two councils.

Key insight #2

Our community wants us to use more recycled water.

Throughout the engagement, there was strong support to increase the amount of treated wastewater we reuse each year. In our second phase of online engagement, more than 90% of respondents indicated they would like us to increase our annual use of recycled water from 25% to 30-40%. Similar feedback was received in our workshops, with numerous participants suggesting that using recycled water to keep more of our sports fields and open spaces green during a drought would deliver health and social benefits.

Concerns were raised about the high treatment costs associated with producing recycled water; however, we were told we should keep an eye out for opportunities that might help reduce these costs, such as improvements in technology or the increased use of renewables.

People were also interested in the idea of recycling wastewater and/or greywater at a residential level to reduce reliance on the potable drinking water supply. We received various questions and suggestions about how these sources could be reused in the home for non-drinking purposes.

There was also a favourable response towards the idea of one day incorporating PRW into our water supply, with 62% of respondents online indicating they would consider drinking PRW in the future. This sentiment was supported in our workshops, with the consensus being that once a regulatory framework had been established in NSW and larger water utilities had begun supplying PRW, it would make sense for the MidCoast to do the same to diversify our water supply with a climate-independent source.

Key insight #3

We need to keep educating our community about the importance of using water sustainably.

Throughout the engagement we consistently heard that educating the community about the importance of conserving water was vital for ensuring a sustainable water future. We were told that while new infrastructure projects were important for increasing the amount of water we could supply, education and behavioural change initiatives were equally as important because they helped individuals understand the challenges we face and encouraged them to take greater responsibility for their own water use.

We also heard that we should look for ways to incentivise the community to use water more sustainably and ‘change the narrative’ around water conservation and climate change so people would take the issues more seriously. Common suggestions included encouraging the use of rainwater tanks and increasing charges for excessive water use. We were also told that our pricing structure was not conducive to saving water and that we should consider reducing our access charges and increasing our usage charges.

Educating young people so they could positively influence the water use behaviour of future generations was also suggested on multiple occasions.

We also heard it was important for Council to lead by example through our own water-saving initiatives, such as our leakage reduction program and use of smart meters.

Key insight #4

We need to do our best to make our water and sewerage services affordable for our residents.

The affordability of our water and sewerage services was a common theme throughout the engagement. The top response to our online survey question *What most concerns you about our future water supply?* was ‘The cost associated with it’. Similarly, the top response to the question *What is your future vision for water on the MidCoast?* was ‘Our water is affordable for all.’

While the responses to these questions were different among our workshop participants, there was a lot of discussion about the financial impacts of building new infrastructure to improve the region’s water security. We were told we need to consider the relatively high levels of social disadvantage that exist in the area when making decisions, as significant increases in costs could affect the social wellbeing of our more vulnerable residents.

Of the 411 responses we received to our online question *What do you think would be a reasonable annual increase to pay for the options you selected above?*, 40% of respondents

said 'No increase' and 28% said 'Up to \$100'. There was a progressively smaller number of responses for each incremental increase over \$100.

We also received a lot of questions and comments online about the cost of our services and our pricing structure, with numerous people questioning why our access charges accounted for such a large proportion of their bills. We provided information that helped explain this, and it appeared to influence some people's attitudes towards the cost of our services, but we still received a lot of comments suggesting we should be charging more for our usage charges and less for our access charges.

We also received numerous questions and comments about attracting government funding to help pay for new infrastructure so that the costs of these projects didn't significantly increase the cost of our services.

Key insight #5

We should encourage the use of rainwater tanks so people can reduce their reliance on the potable drinking water supply.

We frequently heard that we should find ways to encourage residents to install and use rainwater tanks at home. Many people asked if we would consider introducing a subsidy or rebate scheme to help facilitate this. People commonly felt that using rainwater tanks to supply water for non-drinking purposes around the home, such as in the bathroom, laundry, garden and on the lawn, would reduce their reliance on the potable drinking water supply. We also heard that using rainwater tanks would promote water efficiency by making people more aware of weather conditions and their own water use. Several teams that took part in our Youth Hackathon for Water linked the use of rainwater tanks with increased social responsibility.

Key insight #6

Minimising the impacts on the environment is important when planning the future of our water and sewer services.

We were told frequently throughout the engagement that we should ensure the provision of our water and sewerage services doesn't negatively impact the environment. Concerns were raised about the environmental impacts associated with the various water security solutions we put forth, both during construction and operation. We were told we should seek to minimise environmental impacts when constructing our chosen water security solutions. We were also told that we should lead by example and aim to power these solutions with renewable energy to reduce greenhouse gas emissions.

We also heard that looking after our catchments and waterways was important, especially from the students who took part in our Youth Hackathon for Water.

The impacts of climate change were a common concern, and we were told we should design our services and assets to be adaptable and to account for threats such as sea level rise and extreme weather events.

What we did

From 28 July 2022 to 16 April 2023, we asked our community to let us know what was important to them about our water and sewer services and to provide input into how we should address the major water-related challenges we face.

The engagement was undertaken in two stages.

First, we formed the Our Water Our Future Community Group to provide detailed feedback at key stages throughout the development of *Our Water Our Future 2050*. At our first workshop, we presented the key strategic water-related issues we had identified to the group and sought feedback on these issues and the group's values and sentiments when it came to water. We then asked the broader community to provide feedback about their values and sentiments via an online survey, digital post-it wall and a prompt asking people to reflect on their experiences during the 2019-2020 drought. We invited this feedback through the media, social media, newsletters accompanying our water bills, and our website.

Following further development, we held a second workshop with the Our Water Our Future Community Group. At this workshop, we presented four scenarios - or 'packages of solutions' - to address the key strategic water-related issues outlined at the previous workshop. We discussed the advantages and disadvantages of each scenario and sought the group's feedback, asking them to rank the scenarios in order of their preference and make recommendations to Council.

Based on the group's feedback, we abandoned the scenarios model and asked the broader community to provide input into individual solutions through a second phase of online engagement. We used a variety of channels to let people know we wanted their input, including our website, Facebook, Instagram, email, flyers, posters in shop windows, media releases, newsletters, radio interviews, newspaper articles, news broadcasts and community 'pop-ups'. We also made the information widely available for our staff so they could participate and share with friends and family.

Given the long-term nature of the strategy, we also wanted to engage with young people to ensure their values and sentiments were heard and they had the opportunity to be a part of decisions that would affect their future. To achieve this, we held a youth hackathon and a children's illustration competition.

On the following pages are descriptions of each of the engagement activities we undertook, and data illustrating the responses we received.

How we got the word out

Website

We published the 'Our Water Our Future' page on 17 October 2022 to coincide with the start of National Water Week. The webpage contained information about the water-related challenges facing the MidCoast and explained that the purpose of the strategy was to respond to these challenges over the next 30 years.

It also featured a brief survey to measure people's values and sentiments about the future of water in the region; a post-it wall where people could respond to the prompt 'When it comes to water, I've always wondered...'; and a section where people could reflect on their experiences during the 2019-2020 drought.

This first phase of online engagement was live until 16 March 2023. During this time, the webpage received 1,154 visitor views, with 39% of visits lasting over one minute.

On 17 March 2023, we published the second phase of online engagement on the Our Water Our Future page. This version of the page invited people to provide input into some of the solutions we were proposing to address the key strategic water-related issues facing the region. The page contained questions regarding water security solutions, the use of recycled water for drinking and non-drinking purposes, and increases in costs. We also provided a section where people could ask questions and have them answered by our project team.

This second phase of online engagement was live until 16 April 2023. During this time, the webpage received 2,257 visitor views, with 62% of visits lasting over one minute.

Social media

From 17 October 2022 to 16 April 2023, we published 10 posts on our Facebook page and one post on our Instagram page letting people know about the engagement. The posts promoted the online surveys and the children's illustration competition. These posts reached 46,058 Facebook and Instagram accounts.

Media releases, newspapers, television and radio coverage

The Our Water Our Future engagement was announced in a media release ('National Water Week kicks off conversation about the future of water') on 18 October 2022 and distributed to local and regional media. Four subsequent media releases were issued to promote the engagement between 18 October 2022 and 16 April 2023.

Our staff were interviewed on local radio four times during the engagement period.

Flyer, poster, email and e-newsletter

We distributed around 500 flyers across the MidCoast at events, in shops, and through our libraries and customer service centres. We also put up posters in shop windows in Bulahdelah and Tea Gardens. Refer to Appendix A for a copy of the flyer/poster.

We also sent around 1,300 emails to our community database membership and included seven articles about the engagement in six editions of our weekly e-newsletter, News Wrap.

Face-to-Face engagement

For our face-to-face engagement, we held workshops at our administration and customer service centre at the Yalawanyi Ganya building on Biripi Way, Taree, and spoke to people at 'pop-ups' at local markets across the MidCoast.

More detail on these engagements can be found on the following pages.



Photo: Students from our Youth Hackathon for Water presenting at the second Our Water Our Future Community Group workshop.

Online engagement

Community members provided input into *Our Water Our Future 2050* during two phases of online engagement.

Phase 1

Our first phase of online engagement was open from 17 October 2022, when we published the *Our Water Our Future* page, to 17 March 2023, when we launched the second phase of online engagement.

During the first phase of online engagement, we invited community members to share their values and sentiments about water in the MidCoast via a survey, a post-it wall and a section where people could reflect on their experiences during the 2019-2020 drought.

Values and Sentiments Survey

The purpose of the 'Values and Sentiments Survey' was to gain a better understanding of what was important to people about water in the MidCoast.

The survey was open from 17 October 2022 to 17 March 2023 and attracted 51 responses. It was based on questions we asked in the first *Our Water Our Future* Community Group workshop. The questions concerned our water and sewer services and the future of water in the region. The questions were a mix of multiple choice and free text. Results from the survey are shown on pages 19-22.

Post-it wall and Reflections from the 2019-2020 drought

The post-it wall was open from 17 October 2022 to 17 March 2023 and asked people to respond to the prompt 'When it comes to water, I've always wondered why ...' We received 33 contributions to the post-it wall. See page 22 for key themes and Appendix B for the results.

During this time, we also asked people to reflect on their experiences from the 2019-2020 drought. We wanted to see if people's recent experience with the worst drought on record in the area had given them a greater appreciation for water. We received one contribution, which can be found on page 23.

Phase 2

Our second phase of online engagement was open from 17 March to 16 April 2023. During this phase, we invited community members to provide input into the solutions we were proposing to address some of the key strategic water-related issues in the region. We wanted to understand the community's preferences and see if their views aligned with what the *Our Water Our Future* Community Group had told us in the second workshop.

Future water supply options

We asked people to consider the solutions we were proposing to increase the water security of three of our water supply schemes and select which ones they preferred. These questions

were designed to help us understand the community's preferences when it came to building and operating new infrastructure to increase the amount of water we could supply over 30 years.

The first question we asked was whether people would prefer an off-stream storage dam or a desalination plant to increase the amount of water we could supply from our Manning scheme, which provides water to more than 80% of our population. We included key details to help people make an informed decision, including the proposed location of each solution; how much water they would supply; whether they were rainfall-dependent; how energy intensive they were; the approximate time it would take to commission them; and their approximate cost over 30 years.

We received 593 responses to this question.

The second question we asked was whether people would prefer off-stream storage dams to increase the amount of water we could supply from our Gloucester and Bulahdelah schemes, or for us to connect these schemes to the Manning scheme via pipelines and pumps. We again included key details about each solution to help people make an informed decision.

We received 352 responses to this question.

The responses to both these questions can be found on pages 27-28, and a screenshot of the questions and details can be found in Appendix C.

Recycled water

We asked people if they would like to see us increase the amount of wastewater we reuse each year. We outlined that we currently recycle around 25% of our annual wastewater to irrigate sporting fields, farms, golf courses and outdoor spaces across the region, but there was the opportunity to increase this amount to either 30% or 40%, which would allow us to irrigate more recreational areas and outdoor spaces and keep them green during a drought.

We received 391 responses to this question. The responses can be found on page 28, and a screenshot of the question can be found in Appendix C.

Purified recycled water

We asked people if they would consider drinking purified recycled water (PRW) in the future. We wanted to see if the broader community was open to the possibility and if their views aligned with what we heard from the Our Water Our Future Community Group, who told us in the second workshop that we should consider providing PRW in the longer term to increase our water security and diversify our water supply.

We received 405 responses to this question. The responses can be found on page 29, and a screenshot of the question can be found in Appendix C.

Impact on your water bill

To gauge the community's willingness to pay for the solutions we were proposing, we asked people how much extra they thought it would be reasonable to pay each year on their water and sewer bill. We offered five options to choose from, ranging from 'No increase' up to '\$400+'.

We received 411 responses to this question. The responses can be found on page 30, and a screenshot of the question can be found in Appendix C.

What you told us

This section provides detail about what people told us during the various engagement activities we undertook between July 2022 and April 2023. These activities are presented in the order they were completed.



Photo: Participants at the first Our Water Our Future Community Group workshop discussing the key strategic water-related issues the MidCoast faces.

Our Water Our Future Community Group workshop 1

On 28 July 2022, 29 people attended the first Our Water Our Future Community Group workshop at our administration and customer service centre at the Yalawanyi Ganya building on Biripi Way, Taree. The group had been brought together to represent a diverse range of interests and included:

- community members
- business representatives
- regulators
- irrigators
- tourism operators
- social service providers
- commercial fishers
- Aboriginal and Torres Strait Islanders
- councillors
- Council staff.

Feedback on strategic issues

At the workshop, we presented the key strategic water-related issues we had identified in the MidCoast and asked for the group's feedback. The main themes raised by the group in relation to each issue are listed in the table below:

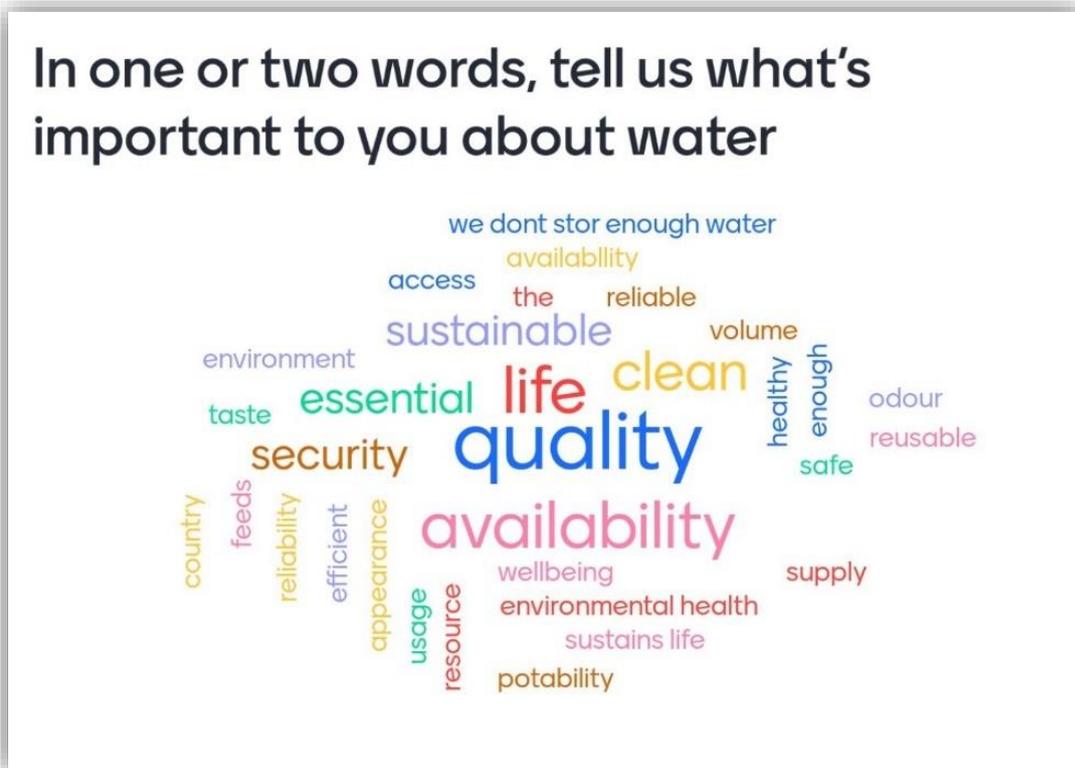
Issue	Key themes
Water security	<ul style="list-style-type: none"> • Concern about lack of water security in the region and need to address it • Importance of planning for increased population and impacts of climate change • Importance of community education and water-saving initiatives • Need to explore all options, including recycled water • Need to protect water supply system from leaks, evaporation and other losses in the network
Sustainable effluent management	<ul style="list-style-type: none"> • Concern about the cost and high energy use associated with producing recycled water • Investigate opportunities to increase use of recycled water • Investigate opportunities to offset costs associated with producing recycled water, such as advancements in technology, use of renewable energy, tapping into new markets, and securing grants or subsidies • Importance of educating community about recycled water • Investigate opportunities to make greater use of biosolids
Unserviced villages	<ul style="list-style-type: none"> • Acknowledgement of the financial challenges associated with servicing new villages • Environmental concerns and risks

	<ul style="list-style-type: none"> • Need for onsite sewage system owners to take more responsibility and Council to increase inspections • Importance of educating broader community about the issue
Climate change	<ul style="list-style-type: none"> • Need to look at opportunities to produce our own renewable energy such as solar power and hydropower • Council needs to take the lead in responding to climate change, both through its own actions and in educating the community • Need to plan for future impacts of climate change and population growth and be ready to adapt • Community needs to be part of the solution and take responsibility for it • Consider advancements in technology and other opportunities that will help offset the impacts of climate change

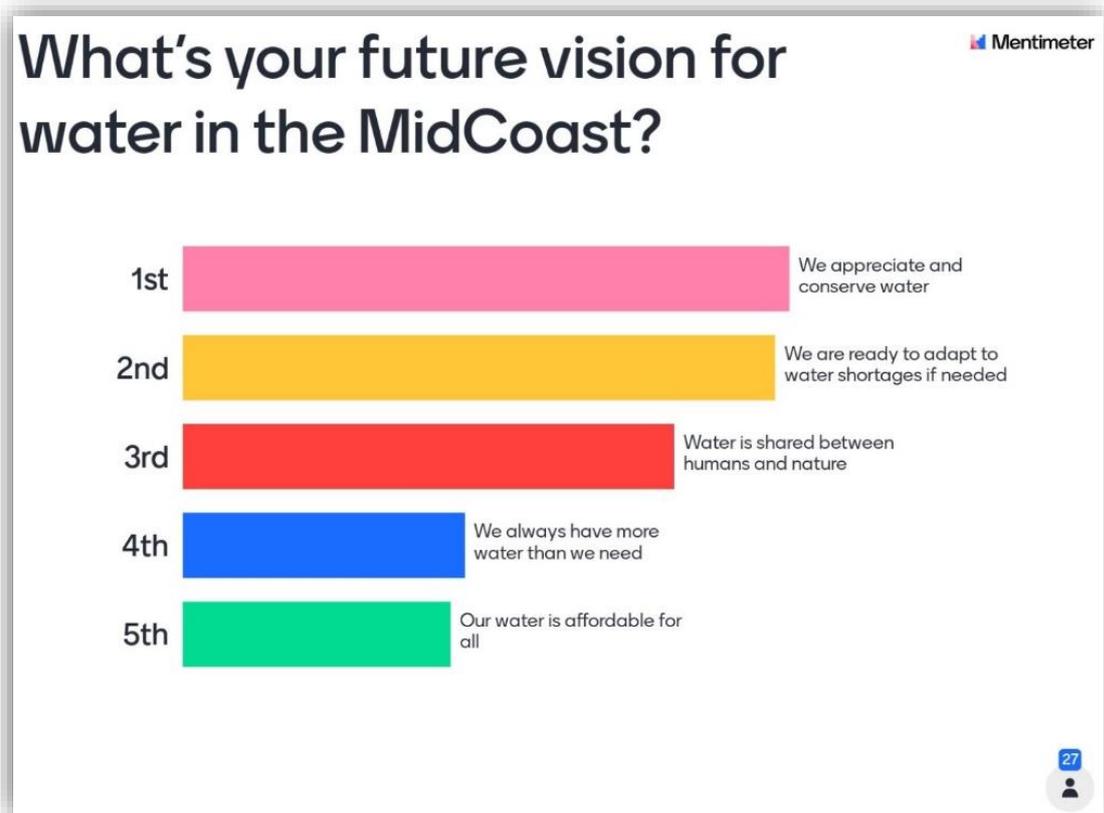
Mentimeter questions

We used Mentimeter to ask the group questions to measure their values and sentiments when it came to water. The questions and their responses are listed below.

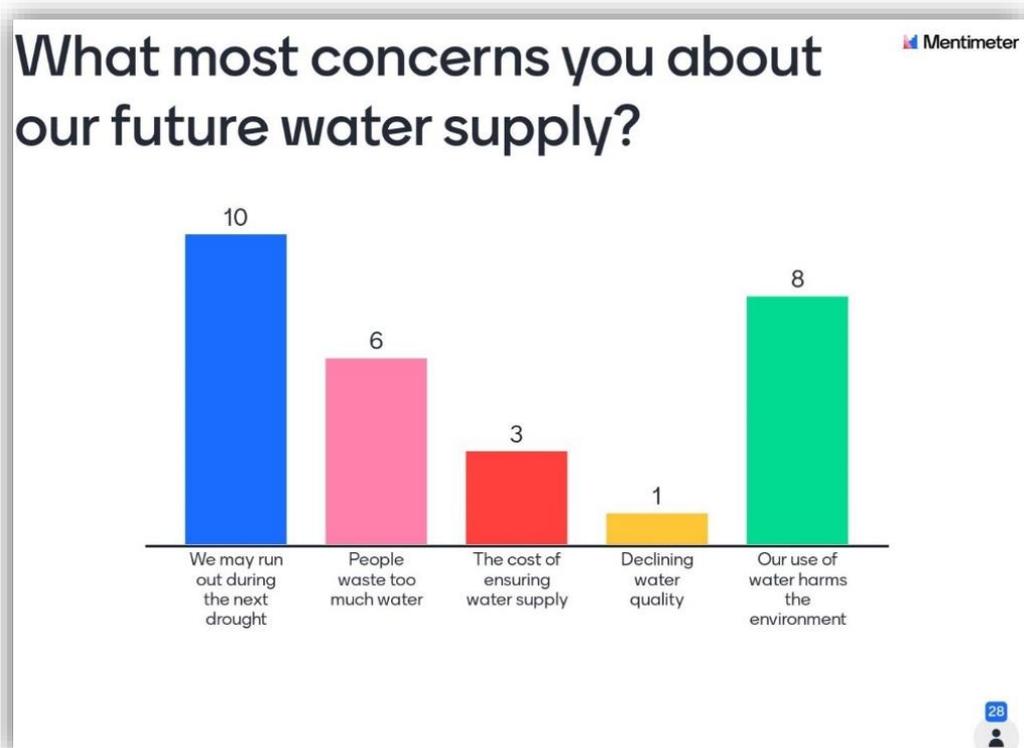
Question 1: In one or two words, tell us what's important to you about water.



Question 2: What's your future vision for water in the MidCoast?



Question 3: What most concerns you about our future water supply?



Question 4: When it comes to water, I've always wondered why ...

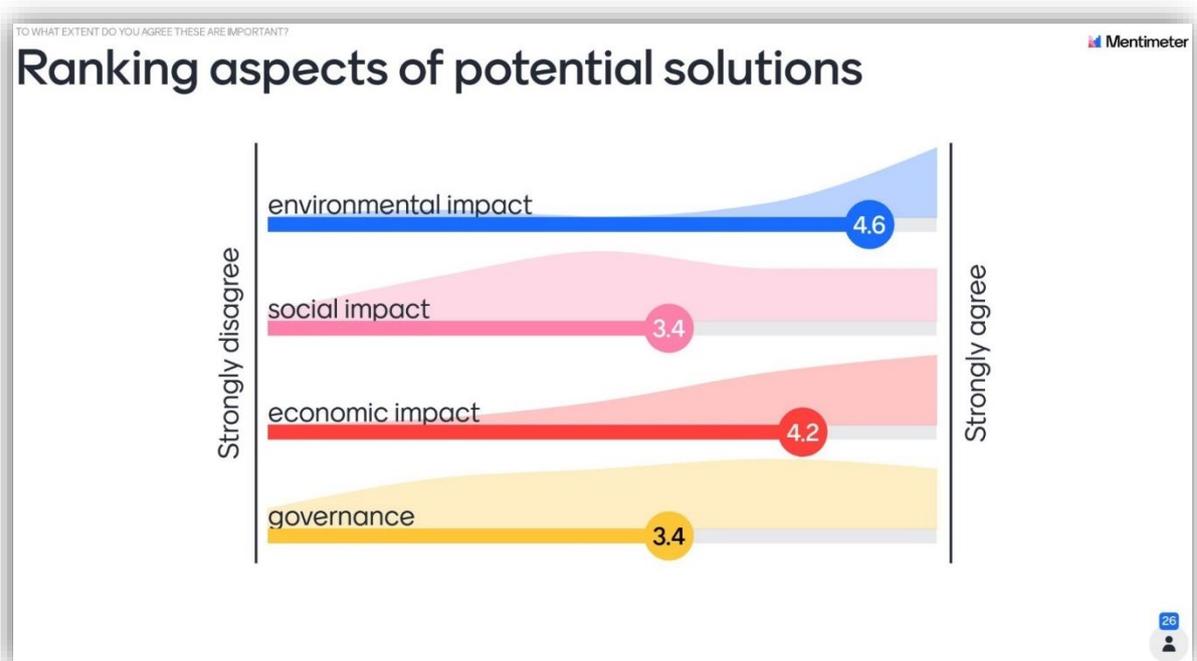
Some of the key themes that emerged in the responses to this question were:

- We don't store enough
- People take it for granted
- There isn't more education about it
- People use so much.

The full list of responses can be found in Appendix D.

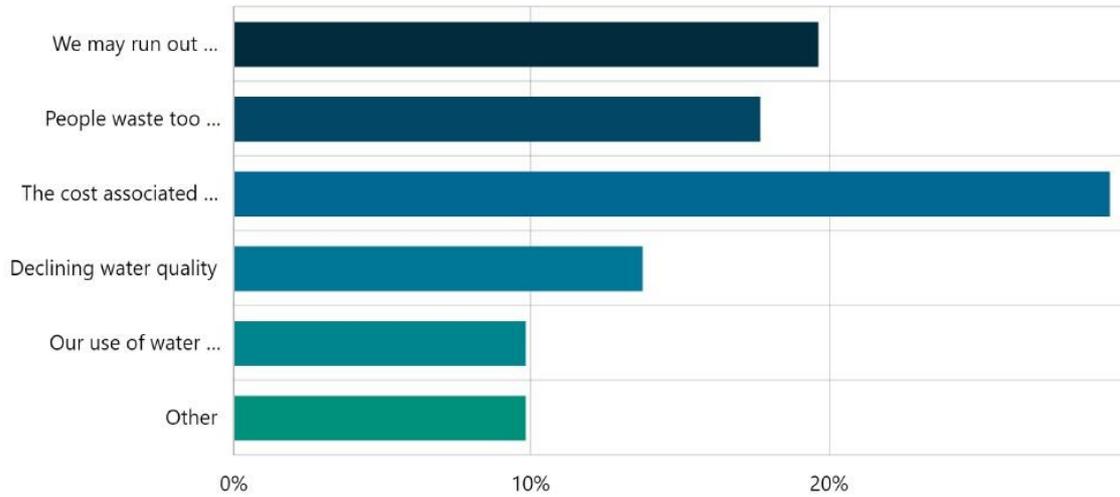
Question 5: Which of the following factors is most important to you when it comes to our water and sewer services?

We also introduced the quadruple bottom line assessment we would use to help us make decisions throughout the development of *Our Water Our Future 2050* and asked the group to select which of the four factors they considered most important. The results are displayed below.



Question 2: What most concerns you about our future water supply?

2. What most concerns you about our future water supply? Required
 Multi Choice | Skipped: 0 | Answered: 51 (100%)

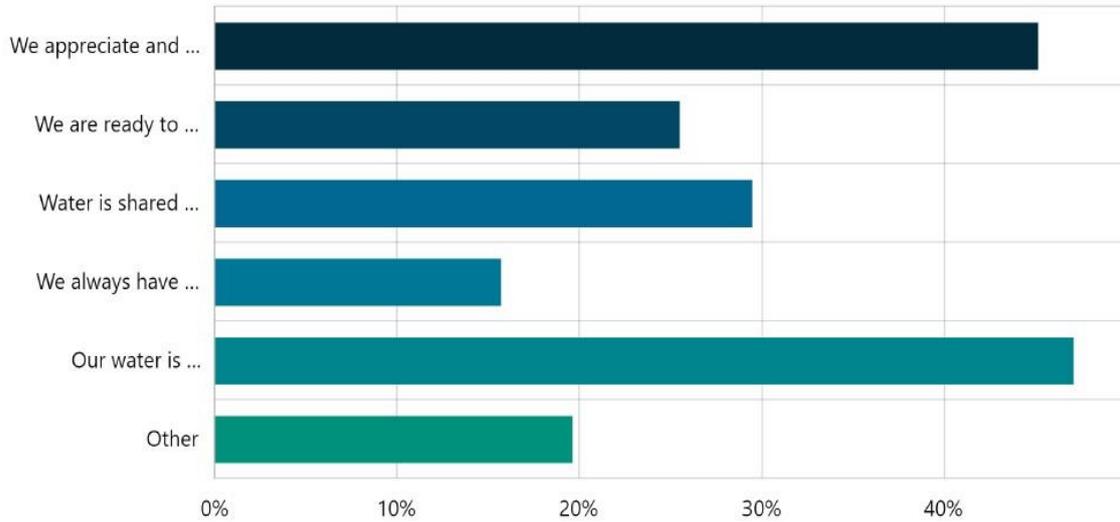


Answer choices	Percent	Count
We may run out during the next drought	19.61%	10
People waste too much water	17.65%	9
The cost associated with it	29.41%	15
Declining water quality	13.73%	7
Our use of water harms the environment	9.80%	5
Other	9.80%	5
Total	100.00%	51

Question 3: What is your future vision for water on the MidCoast?

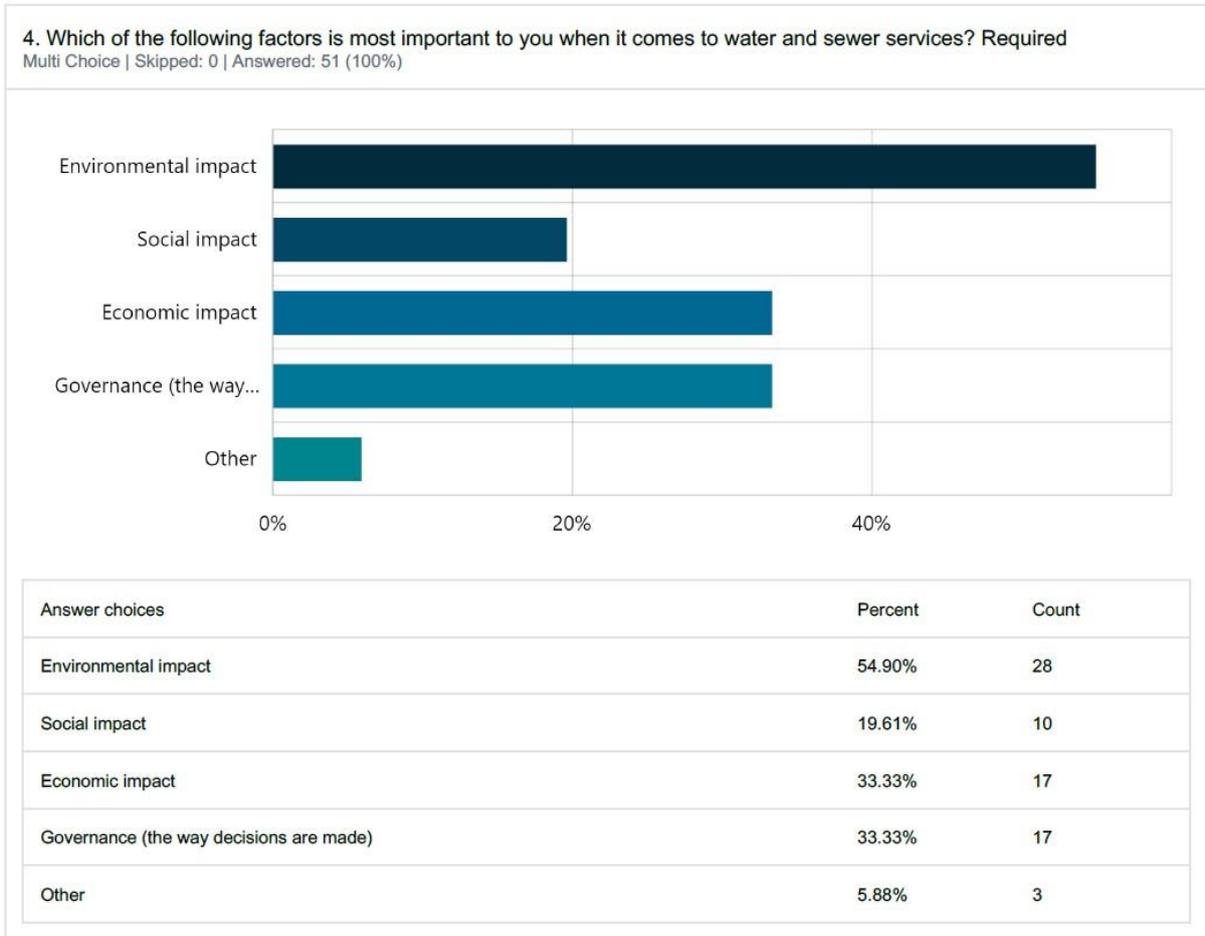
3. What is your future vision for water on the MidCoast? Required

Multi Choice | Skipped: 0 | Answered: 51 (100%)



Answer choices	Percent	Count
We appreciate and conserve water	45.10%	23
We are ready to adapt to water shortages if needed	25.49%	13
Water is shared between humans and nature	29.41%	15
We always have more water than we need	15.69%	8
Our water is affordable for all	47.06%	24
Other	19.61%	10

Question 4: Which of the following factors is most important to you when it comes to water and sewer services?



Post-it wall

Our post-it wall was open from 17 October 2022 to 17 March 2023 and during that time we received 33 responses.

We asked people to respond to the prompt *When it comes to water, I've always wondered why ...*

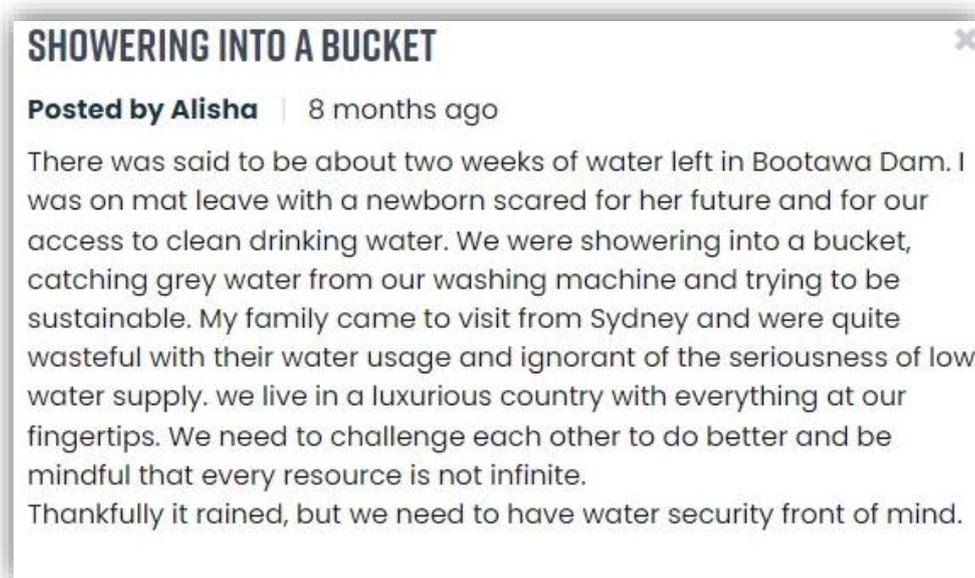
Some of the key themes that emerged in the responses to this question were:

- Use of rainwater tanks
- High cost of our services
- Impact of development and growing population on our water supply.

The full list of responses can be found in Appendix B.

Reflections from the drought

From 17 October 2022 to 17 March 2023, we asked people to share their experiences from the unprecedented 2019-2020 drought. We received one response during this time, which is shown below.



Our Water Our Future Community Group workshop 2

On 28 February 2023, 26 people attended the second Our Water Our Future Community Group workshop at our administration and customer service centre at the Yalawanyi Ganya building on Biripi Way, Taree. The group was made up of participants from the first workshop and some new participants who had been invited to replace those who couldn't make it. In inviting new participants, we tried to preserve the stakeholder representation of the first workshop.

Mentimeter results

At the beginning of the workshop, we used Mentimeter to ask the participants questions about what they had learned in the first workshop, what they expected to get out of the second workshop, and what was most important to them about the future of water. The questions and their responses are listed below.

Question 1: In our first workshop, I learnt that ...

Some of the key themes that emerged in the responses to this question were:

- The importance of water
- Water security requires exploring multiple options and new thinking to meet current and future challenges
- State regulation has more control over water management than Council
- The importance of storing water

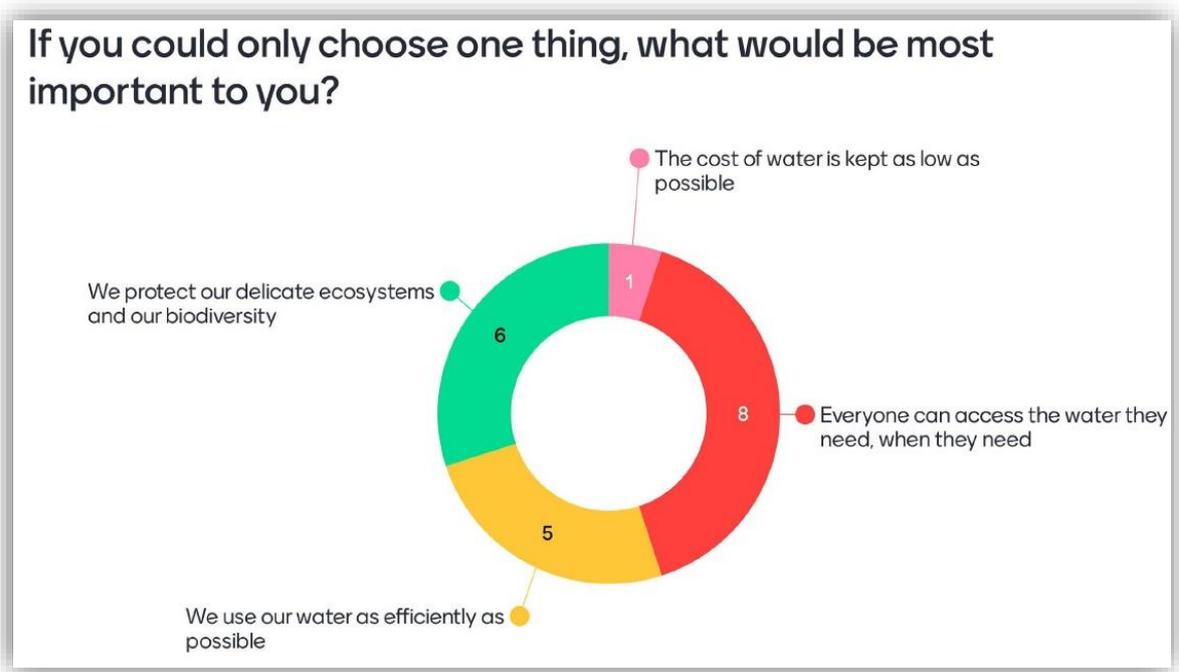
- Climate change and the environment are critical factors to consider when solving water security.

The full list of responses can be found in Appendix E.

Question 2: In one or two words, what would you like to get out of today's workshop?



Question 3: If you could only choose one thing, what would be most important to you?



Scenario ranking

At the workshop we presented the four scenarios - or 'packages of solutions' - that we had come up with to address the key strategic water-related issues facing the region. Using Mentimeter, we then asked the participants to rank the scenarios in order from their most preferred to least preferred. The results are listed below.

The details of each scenario can be found in Appendix 1: Options and Scenarios Report attached to *Our Water Our Future 2050*.



Recommendations to Council

Following the scenario ranking, we asked the participants to group together around their preferred scenario and come up with group recommendations to Council based on their scenarios.

A summary of the main themes we heard is listed below. Refer to the workshop summary report in Appendix F for the full list of recommendations.

Scenario	Main themes
Storage	<ul style="list-style-type: none">• Investigate groundwater resources at Stroud, Gloucester and Bulahdelah in longer term to diversify supply• Investigate use of recycled water for non-drinking purposes• Design a dam where capacity can be increased
Desalination	<ul style="list-style-type: none">• Share a desalination plant with Port Macquarie-Hastings Council

	<ul style="list-style-type: none"> • Make greywater recycling mandatory in new houses • Subsidise the purchase of rainwater tanks
Purified recycled water	<ul style="list-style-type: none"> • Purified recycled water will diversify our water supply and increase our water security
Integrated	<ul style="list-style-type: none"> • Describe the solution as a centralised water supply system • System would be robust and well-managed and would increase the region's water resilience • Community education essential to get the community to support the solution



Photo: Participants at the second Our Water Our Future Community Group workshop discussing their preferred scenarios.

Online Engagement (Phase 2)

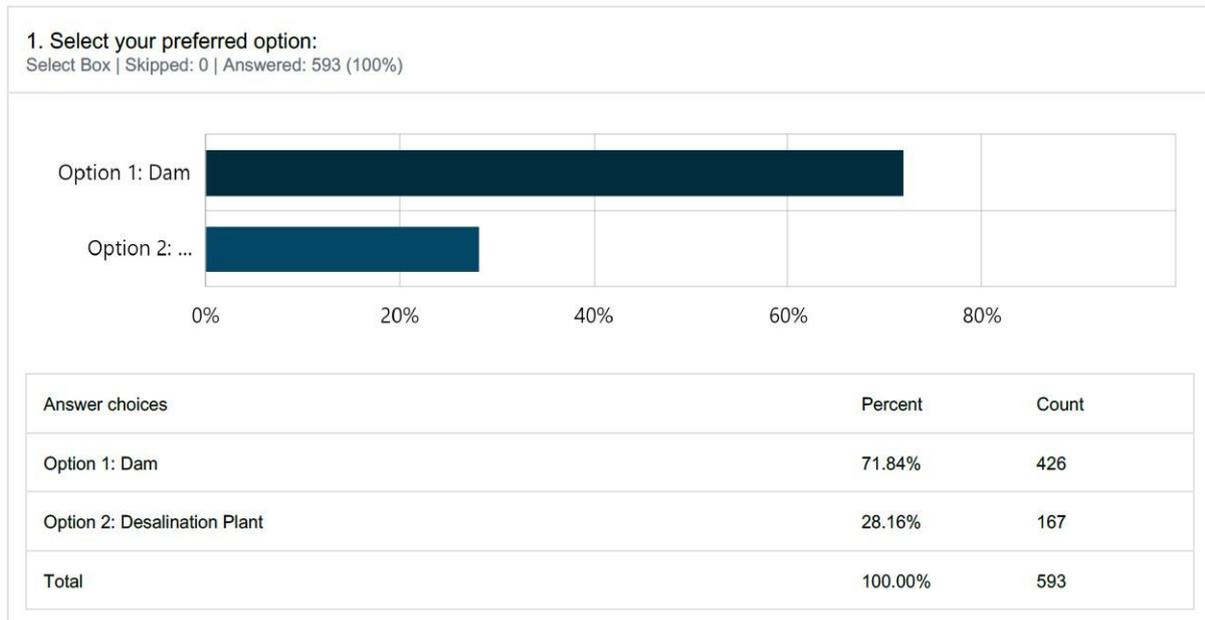
Based on the feedback we received in the second Our Water Our Future Community Group workshop, we abandoned the scenario model for our second phase of online engagement and asked the broader community to provide input into individual solutions to some of the key strategic water-related issues we had identified. This allowed people to consider each solution separately, rather than as part of predetermined 'packages'. This was expected to give a more accurate indication of the community's preferences when it came to the various solutions being proposed.

This phase of online engagement was open from 17 March to 16 April 2023.

Future water supply options

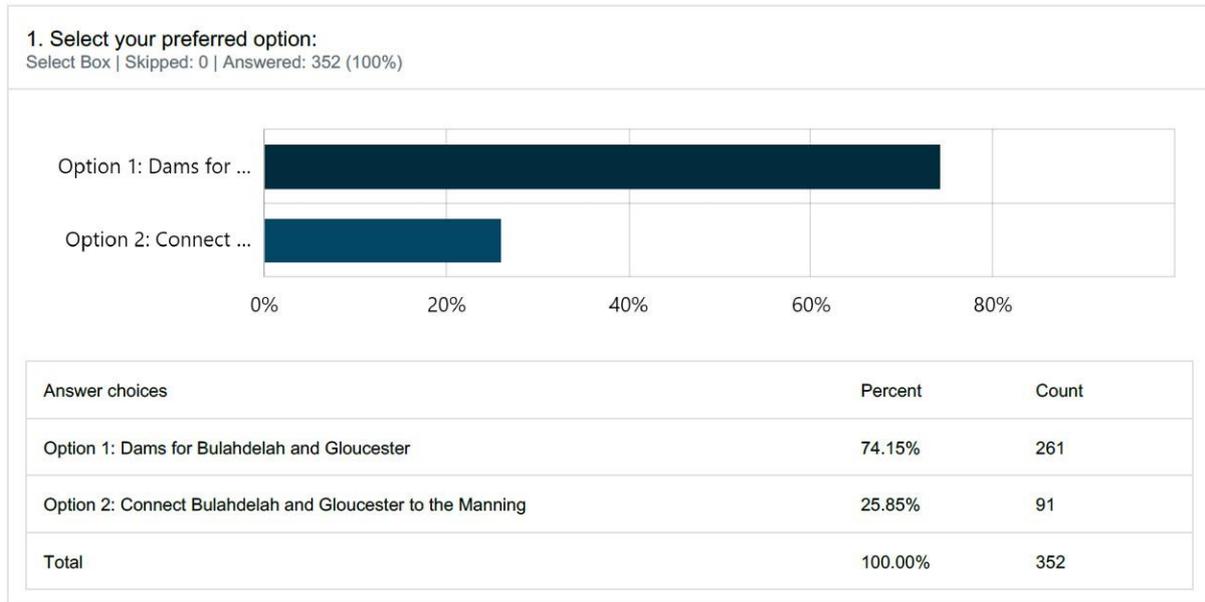
Manning

We asked people if they would prefer an off-stream storage dam or a desalination plant to increase the amount of water we could supply from the Manning water supply scheme. We received 593 responses to this question. The results are shown below.



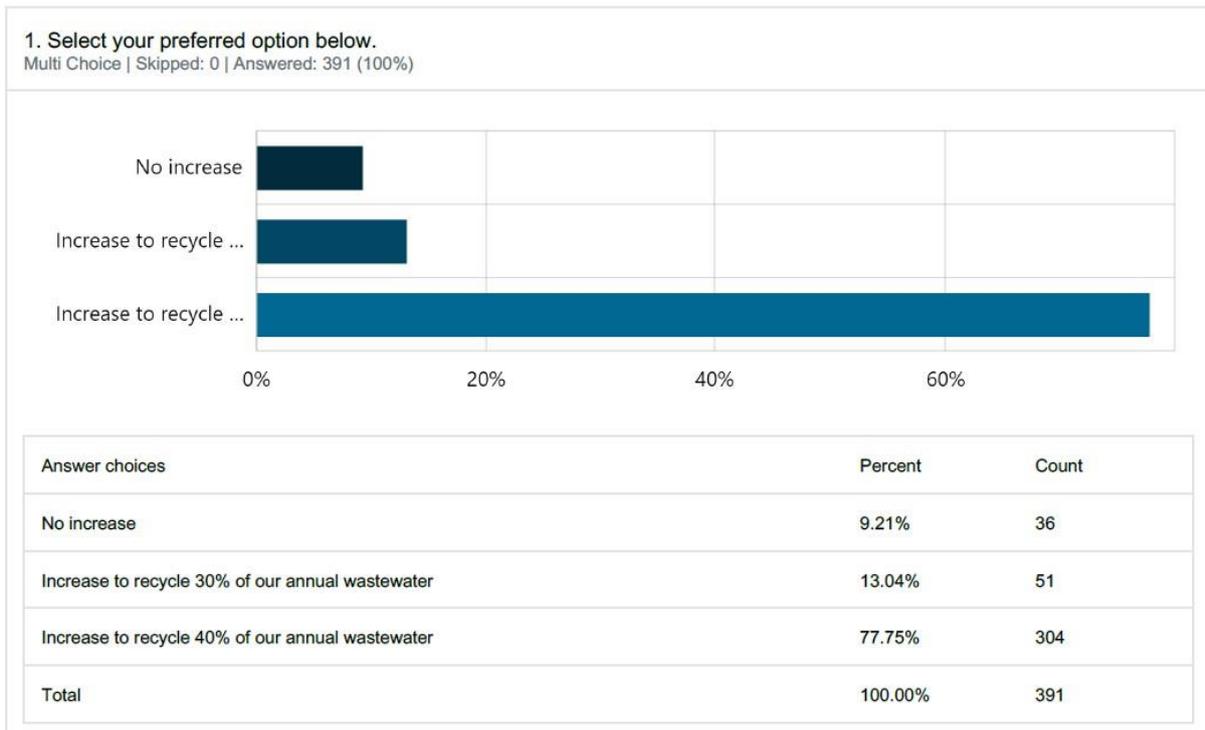
Gloucester and Bulahdelah

We asked people if they would prefer off-stream storage dams to increase the amount of water we could supply from our Gloucester and Bulahdelah schemes, or for us to connect these schemes to the Manning scheme via pipelines and pumps. We received 352 responses to this question. The results are shown below.



Recycled water

We asked people if they would like to see us increase the amount of wastewater we reuse each year. We received 391 responses to this question. The results are shown below.



Purified recycled water (PRW)

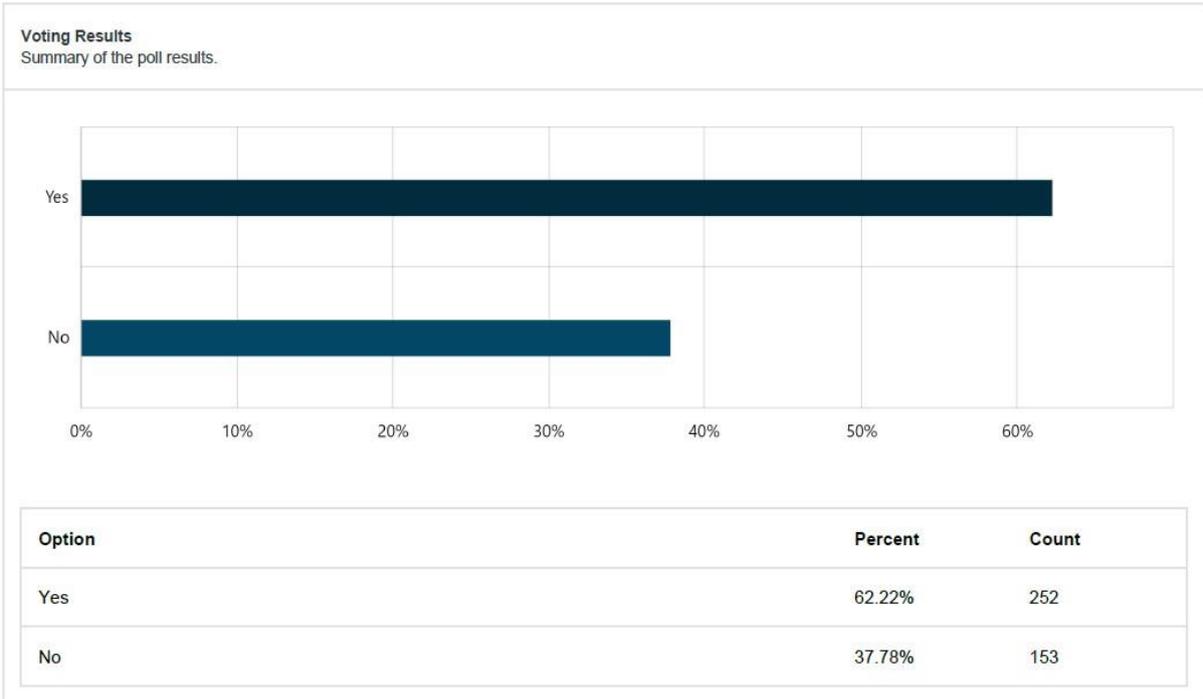
We asked people if they would consider drinking PRW in the future. We received 405 responses to this question. The results are shown below.

Closed

Would you consider drinking purified recycled water?
[Our Water Our Future](#)

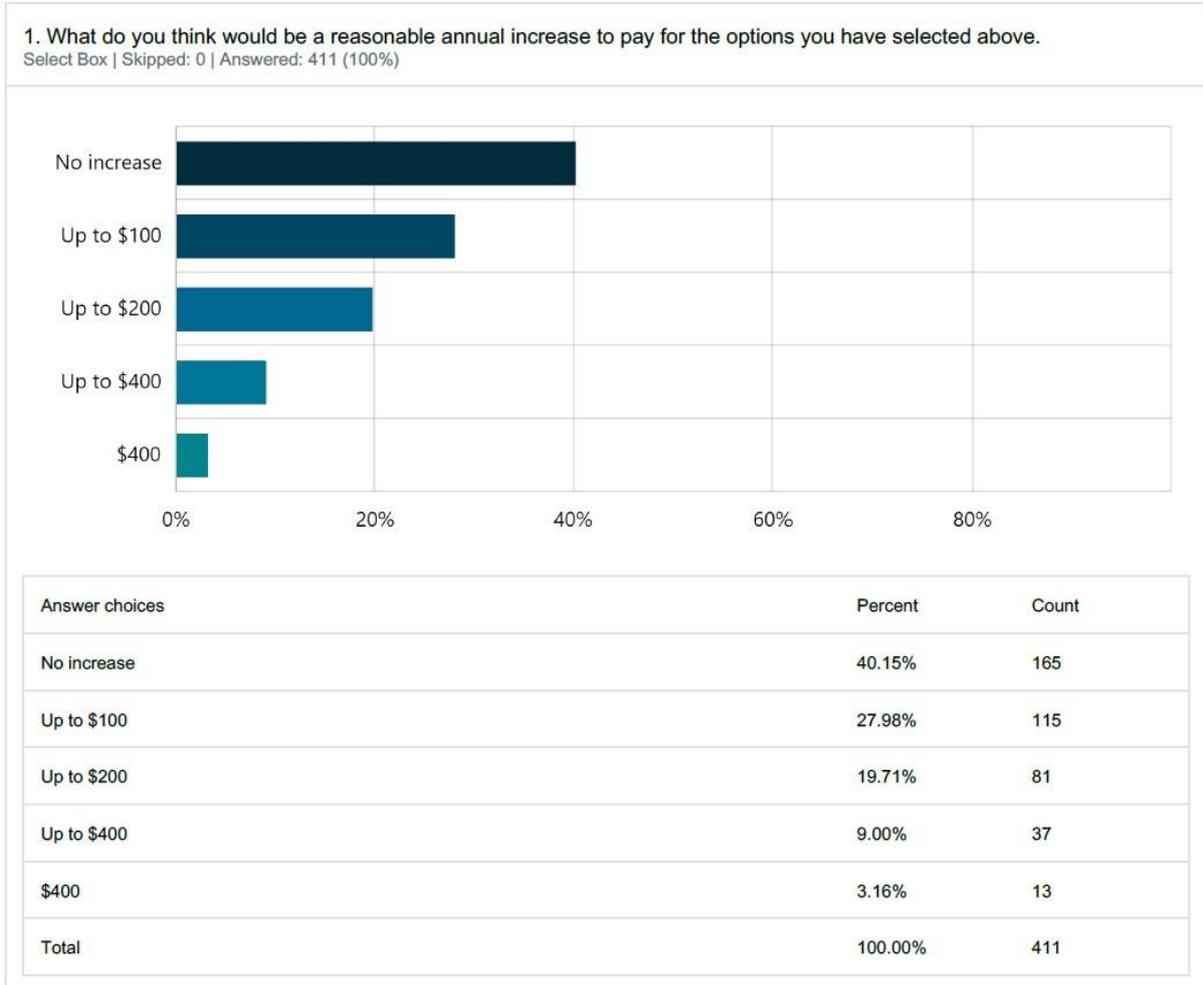
341 Contributors | 405 Contributions

Contribution Summary



Impact on your water bill

We asked people how much extra they thought it would be reasonable to pay each year on their water and sewer bill to pay for the solutions we were proposing. We received 411 responses to this question. The results are shown below.



Pop-up stalls

To encourage the community to provide input into *Our Water Our Future 2050*, we visited eight locations across the MidCoast between 17 March and 16 April 2023 and handed out around 500 flyers, pointing people to the Our Water Our Future page to have their say on the solutions we were proposing. We spoke to approximately 300 people during this time.

A summary of the main themes we heard at each location is below.

Location and date	Main themes
<p>Wingham Show</p> <p>Wingham Showground</p> <p>Saturday 18 March, 10am-2pm</p>	<ul style="list-style-type: none"> • Concern about the cost of our services • Lack of trust in Council • On tank water so not impacted • Importance of planning for the next drought • Concern about not having strict enough water restrictions • Concern about our water being too cheap and people not valuing it
<p>Nabiac Farmers Market</p> <p>Nabiac Showground</p> <p>Saturday 25 March, 8am-12pm</p>	<ul style="list-style-type: none"> • Concern about fluoride in the potable water supply • Questions about the environmental impacts of dams and desalination plants • Questions about our water network and where our water comes from • Questions about our current practices when it comes to the acquisition of land • Concern about government intervention into landholders' water rights
<p>Tuncurry Markets</p> <p>John Wright Park</p> <p>Saturday 25 March, 8am-1pm</p>	<ul style="list-style-type: none"> • Concern about the cost of our services and potential increases in charges • Concern about pollution in our waterways • Support for both a dam and desalination plant
<p>Old Bar Markets</p> <p>Old Bar Reserve</p> <p>Sunday 26 March, 8am-1pm</p>	<ul style="list-style-type: none"> • Concern about building more dams • Questions about slowing down development to reduce the need to increase water security
<p>The Thursday Produce Market</p> <p>Taree Park</p> <p>Thursday 30 March, 8am-10:30am</p>	<ul style="list-style-type: none"> • Trust in Council to secure water supply • Concern about the cost of our services • Concern about water quality from Bootawa Dam

<p>Tastefest</p> <p>Queen Elizabeth Park</p> <p>Saturday 1 April, 10am-2pm</p>	<ul style="list-style-type: none"> • Opposition to building more dams • Concern about high cost and energy use associated with desalination plants • Support for dams • Concern about fluoride in the potable water supply • Concern about the high cost of our services, particularly for pensioners • Lots of questions about the strategy and the proposed solutions
<p>Black Head Bazaar</p> <p>Wylie Breckenridge Park</p> <p>Sunday 2 April, 8am-1pm</p>	<ul style="list-style-type: none"> • Concern about the cost of our services • Importance of building a climate-independent solution • Support for dams • Opposition to desalination plants and concern about the brine discharged back into the ocean • Suggestions for subsidised rainwater tanks • Suggestion to build a dam and desalination plant • Importance of recycling water for irrigation
<p>Gloucester Mega Farmers Market</p> <p>Billabong Park</p> <p>Saturday 8 April, 8am-12pm</p>	<ul style="list-style-type: none"> • Comments about past plans for dams in Gloucester • Concern about the cost of our services • Support for a dam • Questions about the location of the dam • Concern about lack of water security in Gloucester • Questions about Gloucester Water Upgrade • Questions about connection Gloucester to the Manning scheme • Concern about fluoride in the potable water supply

Youth and children's engagement

We wanted to ensure we provided opportunities for our younger residents to provide input into the future of water in the MidCoast, given that the decisions we would make as part of *Our Water Our Future 2050* would have a direct impact on them over the coming 30 years. To achieve this, we ran a youth hackathon and a children's illustration competition.



Photo: Students at our Youth Hackathon for Water.

Youth Hackathon for Water

On 11 November 2022, 40 senior high school students from across the MidCoast attended our first-ever Youth Hackathon for Water at our administration and customer service centre at the Yalawanyi Ganya building on Biripi Way, Taree. The students were all in Year 10 and 11 and came from Taree High, Great Lakes College Forster Campus, Wingham High, MidCoast Christian College, Manning Valley Anglican College and St Clare's High School.

Following the format of a hackathon, which is a competitive brainstorming event, the students were broken into small teams and asked to work together to design a solution to one of the following problem statements (all of which related to the key water-related issues facing the region):

- How might we reduce the impacts of climate change on our waterways and the urban water cycle?
- How might we maximise our use of recycled water and gain public acceptance of this decision?
- How might we make sure we always have enough water for everyone and our natural environment?

At the end, the students presented their solutions to our judging panel, which was comprised of Mayor Claire Pontin, Taree Aboriginal elder Uncle Will Paulson, Water Directorate executive officer Brendan Guiney, Students for Climate Change leader Ellie Rourke, and MidCoast Young Citizen of the Year, Hailey Trudgeon. A team from Great Lakes College and a team from Taree High were awarded joint winners, with both teams focussing on using wetland plants to reduce runoff and improve water quality in our waterways. These teams, along with a team from Manning Valley Anglican College and a team made up of students from MidCoast Christian College and Manning Valley Anglican College, were invited to the second Our Water Our Future Community Group workshop to present their solutions to the group.

While each team chose to tackle different problem statements and came up with unique solutions, some common themes emerged among the teams. These are listed below.

- Looking after our waterways to improve water quality and reduce runoff and impacts of climate change-related events
- Using recycled water for drinking and non-drinking purposes to reduce reliance on the potable water supply
- Encouraging the use of rainwater and recycled water tanks to reduce reliance on the potable water supply
- Educating the community
- Promoting social responsibility
- Exploring opportunities to produce and use renewable energy
- Combining the use of technology and natural solutions
- Looking at the issues of water security, sustainable effluent management and climate change holistically rather than separately.

Please refer to Appendix G to see the full report from the event.

Our Water Our Future Children's Illustration Competition

From 9 December 2022 to Friday 10 March 2023, we ran a children's illustration competition which encouraged kids aged between five and 12 to finish the sentence 'Water is important because ...' and illustrate their response. We promoted the competition online, through social media, via our e-newsletters and through local holiday care provider Active OOSH.

We received around 60 entries to the competition and awarded prizes in the 5 to 7, 8 to 10 and 11 to 12-year age categories. The following responses illustrate some of the key themes that emerged among the children's entries:

- "It's healthy for you and others."
- "It keeps you alive not dead."
- "Water is important because it hydrates, washes and is used by people and animals every day."
- "It helps feed crops on farms and is a critical product."
- "If I don't have water I can get really sick."
- "Our world revolves around the water. It is the resource we need most."

Please refer to Appendix H to see all the entries.

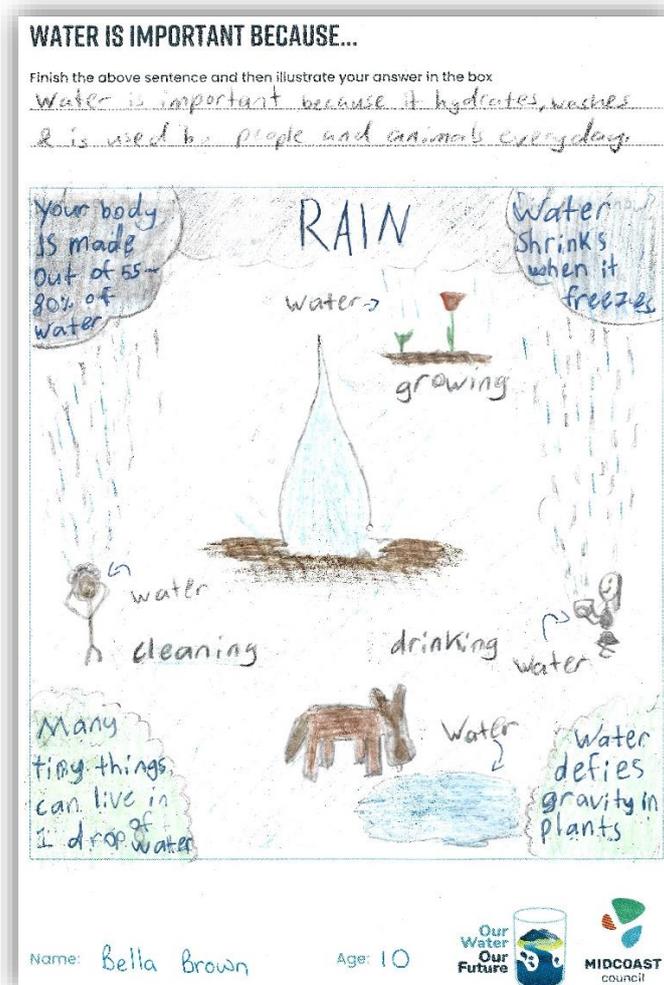


Photo: One of the winning entries from our children's illustration competition.

Appendices

Appendix A – Flyer/poster

Appendix B – Post-it wall responses

Appendix C – Online engagement (Phase 2) questions

Appendix D – Workshop 1 responses

Appendix E – Workshop 2 responses

Appendix F – Workshop 2 Summary Report

Appendix G – Youth Hackathon for Water Summary Report

Appendix H – Children’s illustration competition entries

Appendix A – Flyer/poster

The future of water on the MidCoast

HAVE YOUR SAY

With a changing climate and a growing population, our water supply is becoming increasingly vulnerable to the impacts of drought.



We need to boost the amount of water we can supply now and into the future.

Our long-term water strategy, *Our Water Our Future 2050*, will guide how we respond to the major water-related challenges the MidCoast faces over the next 30 years.



NEW INFRASTRUCTURE

Should we build a new dam or desalination plant?



WATER RECYCLING

Should we increase the amount of wastewater we recycle to keep our recreational areas green?



COST

How much are you willing to pay to have access to these improved services?

Let us know what you think.



scan the QR code
or visit:
bit.ly/3ZTC985

midcoast.nsw.gov.au



Appendix B – Post-it wall responses

Our digital post-it wall was open from 17 October 2022 to 17 March 2023 and asked people to respond to the prompt ‘When it comes to water, I’ve always wondered why ...’

See the full list of responses below.

Date	Screen Name	Response
17 Oct 2022	Sez	Why do people have water filters?
17 Oct 2022	MelanieKSmith	How the water table underground works. How can we tap into that in our local area to provide for livestock & pets during times of drought?
17 Oct 2022	billycart	Everyone that can should harvest water from house and shed roofs in tanks wether they have access to town water or not for drought times.
17 Oct 2022	Maggie	As an adult I know the necessity of having water, as a child No. I cannot understand how there are people who use excessive amounts of water
17 Oct 2022	Gene	Why are new developments being approved when we don't have the infrastructure to support them ie. size of the dams.
17 Oct 2022	Future water problem	Every house in Australia need a water tank to harvest water off their roof, and used for their gardens. As to much water end up in waterway.
17 Oct 2022	Ed Harvey	Why don't strata apartments have individual water meters to monitor individual apartment water consumption?
18 Oct 2022	CAbb	Why are many people so fearful about using recycled waste water for human consumption? It is so well treated by today's high processes.

18 Oct 2022	Kerry B	Why we don't collect water at the source from our roofs anymore. I grew up with tank water it makes you very conscious of your use.
18 Oct 2022	Kennie 101	Water is permitted to be used on grasses areas. With high average annual rainfall in the MCC area there is no need to water grass.
18 Oct 2022	Kate	Why have sewerage treatment ponds been developed so close to the ocean at Old Bar and why has rainforest been cleared for this purpose?
18 Oct 2022	John	We need to stop the influx of people into the area until we have the dam space to accommodate them, not to mention the hospital.
18 Oct 2022	PamDunne	Why people are not aware how precious it is.
18 Oct 2022	Erica	All new homes should have large water tanks for their private use and gardens
23 Oct 2022	Liz McEntyre	Government continues to put fluoride in the water without asking the community their opinion on this matter
27 Oct 2022	Graham Smith	Why aren't all buildings with roof area bigger than a certain amount required to have an appropriately sized water tank (or tanks)?
28 Oct 2022	Mareea	Our gutters are not better designed to keep out debris and just collect rainwater

16 Nov 2022	Cathy Lummis	Planning ahead in preserving our water , would be to introduce water tank rebates like other councils
24 Nov 2022	Ru	Is there a map of council's water infrastructure (all the streets supplied w/ water and sewers, & where all the treatment plants R 4 both)?
24 Nov 2022	Anna	Ive always wondered why water on the midcoast is obscenely expensive like most things here except salaries. I thought we could feedback?????
24 Nov 2022	killing us \$\$\$\$\$	still going to charge excessive supply charge 98 percent of the bill so what is a water tank going to do? We still pay but you benefit
25 Nov 2022	Lauchlan	I would be interested in the condition of our infrastructure and if they can be upgrade for better performance and in turn cheaper bills.
26 Nov 2022	billnee16@gmail.com	Like Anna, November 24, why is water so obscenely expensive. Coffs Harbour shire, Grafton & Tamworth is nowhere near as expensive as here.
27 Nov 2022	Nicky	Councils don't plan for dry years when they allow building such over 50s lifestyle places or highrise concentrations of people using water
28 Nov 2022	ScottBrown	Is it safe to drink
28 Nov 2022	Rater1	I fail to understand why we pay considerably more for our water than most other council areas. It's an essential service.

28 Nov 2022	science	A council would ask such a stupid question...totally irrelevant to your role. Personally I wonder about where water is found in space..
12 Dec 2022	Graham	MidCoast water must find ways to reduce costs for consumers,It's unacceptable, most expensive water in NSW, Help reduce costs of living pres
13 Dec 2022	Tank water	The water tastes like it's dead
15 Dec 2022	Ratepayer	Service charges are extremely high ,yet we are only ever told how to use less water. Less water does not lower service charges . Cut costs.
15 Dec 2022	Fedup	Overdevelopment uses more water. Stop greedy developers who don't care about the community needs only the profit. They need controlling.
09 Jan 2023	SaveTheRiver	Why is Council considering opening public access to the river just upstream from the drinking supply, a serious environmental pollution risk
06 Mar 2023	Chucky	Where is the transparency about water quality ENTERING our domestic supply?

Appendix C – Online engagement (Phase 2) questions

Below are screenshots of the questions we asked and details we provided during our second phase of online engagement.

Future water supply options

Manning

FUTURE WATER SUPPLY OPTIONS

We need to increase the amount of water we can supply from the following systems:

Manning:

Our Manning system provides water to more than 80% of our population, from Crowdy Head to Smiths Lake, including Wingham, Taree, Old Bar, Hallidays Point and Forster-Tuncurry. We have identified two options to increase the amount of water the system can provide, and want your input.



Option 1: Dam

An off-stream storage dam would be built on the Peg Leg Creek tributary and would store water pumped from the Manning River.

Key features:

- Relies on rainfall
- Less energy intensive than a desalination plant
- Potential to produce hydropower and solar energy
- Can store up to 5 gegalitres
- Project will take approximately 10-12 years
- Approximate cost over 30 years: \$155 million

Option 2: Desalination Plant

The plant would be built south of Hallidays Point and pump seawater from the ocean and treat it to drinking water standards.

Key features:

- Doesn't rely on rainfall
- More energy intensive than a dam
- Amount of water supplied can be dialled up or down depending on weather conditions
- Can supply up to 30 megalitres per day
- Project will take approximately 8-10 years
- Approximate cost over 30 years: \$240 million

Select your preferred option:

----- ▾

Gloucester and Bulahdelah

Gloucester and Bulahdelah:

We have identified two options to increase the amount of water the Gloucester and Bulahdelah systems can provide, and we want your input.



Option 1: Dams

Off-stream storage dams would be constructed to increase the amount of water that can be stored.

- Relies on rainfall
- Less energy intensive than Option 2
- Gloucester dam could store up to 250 megalitres
- Gloucester dam would be delivered approximately 3-5 years after Manning project is completed
- Bulahdelah dam could store up to 200 megalitres
- Bulahdelah dam would be delivered approximately 3-5 years after Gloucester dam is completed
- Approximate cost over 30 years: \$45 million



Option 2: Connect to the Manning

Gloucester and Bulahdelah would be connected to the Manning system via a network of pipes and pumps.

Key features:

- Water would be supplied from the preferred option for the Manning
- Opportunity to provide water to previously unserved locations
- More energy intensive than dams
- Would be delivered 8-10 years after Manning project
- Approximate cost over 30 years: \$57 million

Select your preferred option:

Recycled water

RECYCLED WATER

Currently, we recycle 25% of our wastewater and irrigate several sporting fields, farms, golf courses and outdoor spaces across the region. We have the opportunity to increase the amount of wastewater we recycle to irrigate more recreational areas and outdoor spaces in the MidCoast. This would ensure they could continue to be used during a drought.

Select your preferred option below.

- No increase
- Increase to recycle 30% of our annual wastewater
- Increase to recycle 40% of our annual wastewater

Submit

Purified recycled water

PURIFIED RECYCLED WATER

Purified recycled water is wastewater that has been treated to be safe to drink. We have the opportunity to increase the amount of water we can supply in the future using purified recycled water.

Would you consider drinking purified recycled water?

- Yes
- No

Submit

Impact on your water bill

IMPACT ON YOUR WATER BILL

The average annual water and sewer bill in the MidCoast is \$2100.

What do you think would be a reasonable annual increase to pay for the options you have selected above.

Submit

Appendix D – Workshop 1 responses

At the first Our Water Our Future Community Group workshop, we used Mentimeter to ask participants to respond to the question ‘When it comes to water, I’ve always wondered why...’

Below is the full list of responses.

When it comes to water, I’ve always wondered why ...

We take it for granted,	We never store enough	We use so much for agriculture.
We do not invest in capturing more of the rain fall	We don't better balance the communities needs for drinking water vs recycled water	We don't price it properly.
Why not water and sewer every Village	It's so cheap	We can't reuse more

When it comes to water, I’ve always wondered why ...

There's regulations against drinking from rainwater tanks	We do not do more to conserve what is easy to conserve.	We only talk about it when it's a drought
We don't value it more	We use so much	We waste so much storm water runoff
We that it for granted	We don't educate people more so they don't take it for granted	We use potable water for things we shouldnt

When it comes to water, I've always wondered why ...

We use so much

Why my teenagers have such long showers

We don't use stormwater as much as we should

We don't have more renewable energy systems powering pumping stations

Why is irrigation delivered during the peak of the day when evaporation is a problem. Rec grounds, golf courses and farmers all do it.

The need to educate people more regarding our water

Water supply catchments are managed differently across the state. Sydney drinking water catchment you can't walk into, here we have many unregulated and unmanaged polluting activities

Only 1% of what is supplied is actually drunk

It's so cheap

When it comes to water, I've always wondered why ...

Good to drink

It's a source of life and wellbeing

Ongoing availability

We don't recycle more water

Wellbeing

Water is not foremost in everyone's mind.

Safety and quality with adequate quantity

Available reliable

1

Appendix E – Workshop 2 responses

At the beginning of the second Our Water Our Future Community Group workshop, we used Mentimeter to ask participants to respond to the question ‘In our first workshop, I learnt that ...’

Below is the full list of responses.

In our first workshop, I learnt that ... Mentimeter

- Water is precious and not unlimited, it needs to be conserved. The MCC is the planning authority for water conservation in this area.
- I missed it sorry
- New thinking is required to meet current and future challenges
- I did not attend the first workshop.
- There are a lot of people interested in the future of water
- Council are doing a thorough job of exploring options for water security
- Unfortunately i missed it
- The important of water
- Our water use is low per person compared to other areas

In our first workshop, I learnt that ... Mentimeter

- Wasn't here (sorry 🙏) - but I heard a lot of good things 😊
- I did not participate in workshop1
- Sorry I wasn't there
- That was so long ago
- Water is an issue within our community. That the community has an interest in water sustainability. There are many options available
- The future of our water resources is one the most important aspects towards climate change
- Council has little control over water management directly as state acts and regulations dictate a lot
- Water is integrated into all facets of society
- council has a major off river storage at bootawa dam

In our first workshop, I learnt that ...



Efficient use of water is essential but planning of new residential growth must be based around where water can be sustainably supplied without wrecking the natural environment

Next

Important to store water

Water security is hard!!

Did not participate.

Appendix F – Workshop 2 Summary Report

**Our
Water
Our
Future**



Our Future Our Water Workshop 2 Summary

14-Apr-2023
MidCoast Council Integrated Water Cycle Management Strategy

Our Future Our Water Workshop 2 Summary

Client: MidCoast Council

ABN: 44 961 208 161

Prepared by

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14-Apr-2023

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Quality Information

Document Our Future Our Water Workshop 2 Summary

Ref

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Date 14-Apr-2023

Originator Natalia Morawski

Checker/s

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			Name/Position	Signature
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A	14-Apr-2023	Final		

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1.0 Introduction

MidCoast Council (Council) is developing an Integrated Water Cycle Management (IWCM) Strategy for the MidCoast region, *Our Water Our Future 2050*, which will be submitted to the NSW Department of Planning and Environment (DPE) for endorsement in mid 2023. As part of developing this strategy Council is consulting with the community and stakeholders on four scenarios that have been identified and assessed against a Quadruple Bottom Line assessment.

The four scenarios Council is seeking feedback on are:

- Scenario one: storage
- Scenario two: desalination
- Scenario three: recycled water
- Scenario four: water sharing.

On Tuesday 28 February 2023, Council hosted the second Our Future, Our Water workshop (the workshop) between 8.30am and 3.30pm at MidCoast Council Chambers, Yalawanyi Ganya building, Taree.

AECOM Australia Pty Ltd (AECOM) was engaged by Council to undertake the options and scenarios phase of the IWCM, including support with delivery of the workshop.

1.1 Purpose of the workshop

The purpose of the workshop was to:

- present the scenarios to the Our Water Our Future Group (the Group)
- obtain feedback on the scenarios presented
- understand what the Group liked, concerns they had and information gaps on each of the scenarios
- prioritise the scenarios and select the preferred scenario for the Integrated Water Cycle Management Strategy and further consultation.

1.2 Workshop participants

Council invited the Our Water Our Future Group on 24 January 2023. The workshop participants were from the following stakeholder groups:

- MidCoast Council staff
- MidCoast community
- Councillors
- Department of Planning and Environment – Water
- NSW Environment Protection Authority
- NSW Health
- MidCoast 4 Kids
- Wingham Chamber of Commerce
- Foster Tuncurry Business Chamber
- Aboriginal elders
- MidCoast 2 Tops Landcare

- Water Directorate.

The full list of participants can be found in Appendix A.

1.3 Workshop pre-reading material

To prepare the participants and enable them to participate meaningfully in the workshop, Council sent the attendees a fact sheet on each of the water security options being considered for the scenarios. The fact sheets were sent to the participants on 22 February 2023.

The fact sheet topics included:

- Recycled Water for Non-Drinking
- Groundwater
- Interconnection of Water Schemes
- Off-Stream Storage
- Rainwater Tanks
- Our Water Supplies
- Water Conservation
- Catchment Management
- Seawater Desalination
- Purified Recycled Water
- Stormwater Harvesting.

2.0 Workshop format

The in-person workshop was facilitated by Sara Wilson, Council's Community Relations and Education Coordinator, with support from Council's Planning Team and AECOM. The workshop agenda is in Appendix A.

Participants were seated across five tables, with each table having four to five participants. To ensure a diverse representation of groups at each table, participants were assigned to a table. Photos from the workshop are provided in Figure 1 below.

Figure 1 Photos of workshop



2.1 Presentations

Several presentations were held throughout the day including:

- Welcome to Country
- Opening and introductions
- Workshop objectives
- Youth art / drawing competition on what water means to them
- Highschool 'Hack for Water'
- Journey of the Our Water Our Future Strategy since Workshop 1
- The four scenarios – including a Q&A after each scenario presentation
- Next steps.

2.2 Digital interactive tool – Mentimeter

Mentimeter was used to receive individual and anonymous responses to the following questions:

- *From our last workshop, I learnt that...* - free text response.
- *In one or two words, tell us what you'd like to get out of today's workshop* – word cloud response.

- *If you had to choose one thing, what's most important to you about water?* – multiple choice response.
- *Rank the scenarios from most preferred to least preferred* – options ranking response.
- Multiple feedback questions on the workshop – rating of 1 to 5 response.

2.3 Break out group discussion and feedback

Following the presentation and Q&A on each scenario, break out group discussions were held to collect feedback specifically relating to:

- what is liked about the scenario
- concerns about the scenario
- questions of information gaps about the scenario.

The discussion was facilitated and scribed by an AECOM or Council staff member, and participants reported their group's discussion back to the room.

2.4 Participant recommendations

Following the individual scenario ranking on Mentimeter, participants were asked to select a preferred scenario by moving to the table that corresponds to the scenario. Each table was then asked to write a recommendation for Council regarding the preferred scenario.

3.0 Feedback

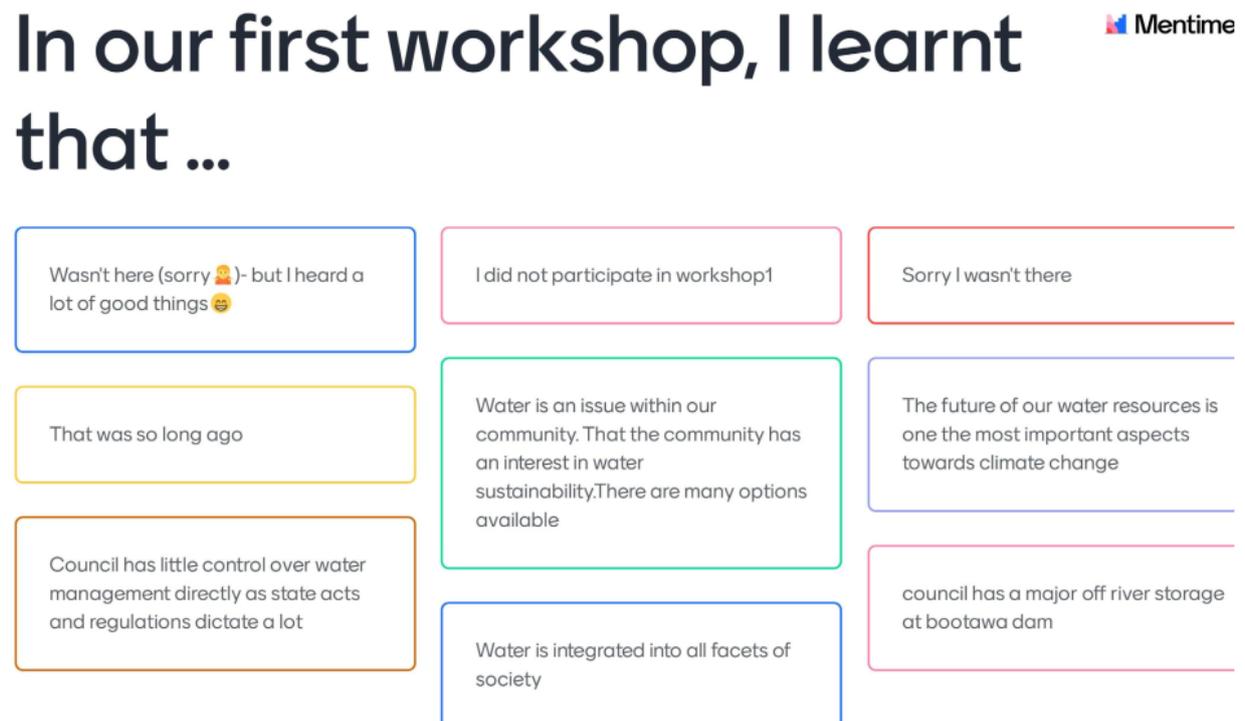
3.1 Mentimeter Results

In our first workshop, I learnt that

Recurring themes that came out of the response to the question “In our first workshop, I learnt that...” included:

- The importance of water
- Water security requires exploring multiple options and new thinking to meet current and future challenges
- State regulation has more control over water management than Council
- Importance of storing water
- Climate change and the environment are critical factors to consider when solving water security.

Figure 2 Sample of Mentimeter feedback for Workshop 1 reflections



In one or two words, what would you like to get out of today’s workshop?

The word cloud shown in Figure 3 below was used to collect responses on the question “In one or two words, what would you like to get out of today’s workshop?”. The three most used words in the responses were:

- Future
- Understanding
- Insights.

Figure 3 Word cloud for Workshop expectations

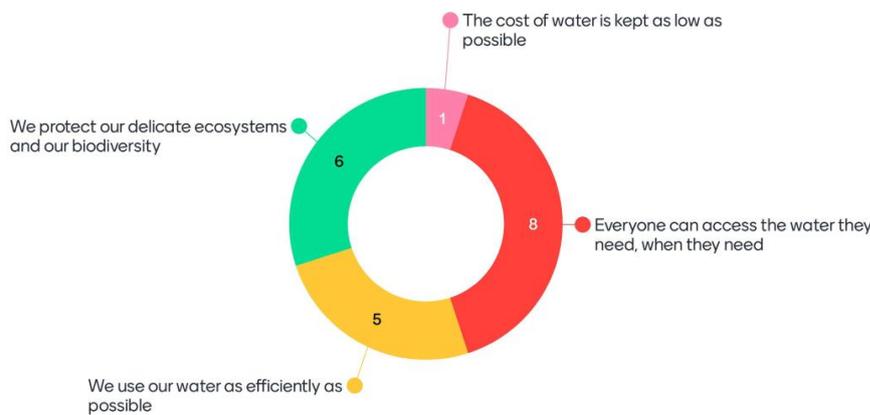


If you could choose one thing, what would be most important to you

Results for the multiple choice question, “If you could only choose one thing, what would be most important to you?” are shown in Figure 4 below. The option “everyone can access the water they need, when they need” was the most selected response.

Figure 4 Results for question regarding importance of water

If you could only choose one thing, what would be most important to you?



Scenario ranking

The results for the scenario ranking are shown in Figure 5 below. Scenario 1 was ranked as most preferred by the participants.

Figure 5 Results for scenario ranking



3.2 Key themes on scenarios

3.2.1 Scenario 1: Storage

The key themes from what participants liked about Scenario 1 Storage are:

- It utilises existing infrastructure
- Is a proven solution that is familiar and low risk
- Hydro and solar can be used to offset the energy costs
- Low cost
- Place making opportunities.

The key themes from what participants had concerns about are:

- Environmental impacts during construction and operation
- Not an innovative solution
- Climate dependent
- Does not benefit all water users such as farmers and irrigators.

The recurring questions that participants had about Scenario 1 Storage were:

- When will the dam be built?
- Can recycled water or aquifers be included in this scenario?
- What is the true value of floating solar?
- Has population growth been taken into consideration?
- What is the footprint of the dam?

- What level of water security does the dam provide during droughts and water restrictions?
- What is the carbon footprint of construction and operation?

3.2.2 Scenario 2: Desalination

The key themes from what participants liked about Scenario 2 Desalination are:

- Climate independent
- Achieves water security more readily
- Provides security for western schemes
- Potential for employment opportunities
- Incorporates recycled water
- Lower construction footprint.

The key themes from what participants had concerns about are:

- Energy intensive
- Used membranes are not recyclable
- Impacts on the Hallidays Point community.
- Desalination Plants are high maintenance assets i.e., membranes need frequent replacing, control of barnacle growth
- May result in higher costs for the rate payer
- Desalination plants are generally opposed by the community
- Desalination plants are expensive to operate
- Environmental risks of releasing brine into the ocean
- Increases reliance on water we are already reliant on.

The recurring questions participants had about Scenario 2 Desalination were:

- Can water be outsourced to other LGAs to offset costs?
- Will the saltwater degrade the asset more quickly?
- Can the desalination plant be operated using renewable energy?
- Is Hallidays Point the best location for a desalination plant?
- Can the desalination plant be constructed without the membranes to leave it off until it is required?
- What are the environmental impacts?
- Can the desalination plant be smaller?

3.2.3 Scenario 3 Purified Recycled Water

The key themes from what participants liked about Scenario 3 are:

- Cost effective solution compared to other scenarios
- Socio-economic benefits of keeping green spaces green and functioning
- Combines immediate benefits of the dam and long-term benefits of purified recycled water

The key themes from what participants had concerns about are:

- There is a negative public perception around purified recycled water

- Creates a divide between the LGAs i.e., northern LGA is supplied by a dam and southern LGA is partially supplied by purified recycled water
- The community may not accept purified recycled water until a regulatory framework is established
- High cost for minimal yield
- Limited in achieving water security without inclusion of Peg Leg Creek Dam.

The recurring questions from participants on Scenario 3 Purified Recycled Water are:

- Can the recycled water be stored in a tank?
- What are the government regulations for purified recycled water?
- Can the water be treated to drinking water standards and put into the network, rather than stored in an aquifer?
- Can we rely on neighbouring, bigger water suppliers to pioneer this option first?

3.2.4 Scenario 4

The key themes from what participants liked about Scenario 4 Water Sharing were:

- Potential to provide water to unserved villages along pipeline
- Money can be saved on not requiring upgrade of the WTPs
- Staging the project by starting with the smaller schemes
- Increases water resilience
- Centralises water management and creates efficiencies
- Employment opportunities for construction.

The key themes from what participants had concerns about are:

- Minimal gains in efficiency by interconnecting
- Impact on the community and environment relating to securing easements and constructing pipes
- High cost for minimal gains
- Is the cost benefit ratio justified for lower-growth areas?
- Water sharing with other LGAs that are also under water stressed

Recurring questions from participants on Scenario 4 Water Sharing were:

- Can Council consider taking water from Tea Gardens to Bulahdelah instead?
- What are the risks of longer pipelines and more pump stations?
- Would unserved villages pay water contribution fees to connect to the network, therefore increasing yearly revenue?
- Are there opportunities to connect to Port Stephens?

3.3 Participant recommendations

3.3.1 Scenario 1 Storage

Securing our future water storage

Items to keep in mind:

- Investigate ground water resources at Stroud, Gloucester, and Bulahdelah.
- Investigate use of recycled water for non-drinking purposes.

- Greenfields towns, such as Brimbin, offer the opportunity to be innovative and integrate recycled water.
- Future additions to the scenario.
- Keep in mind opportunities to extend the network so that transport of water during droughts is closer to critical towns.
- Design a dam where capacity can be increased.

Rationale:

- Opportunity to offset the area used for regeneration for Koala habitat.
- Lower risk option from an approval and environmental perspective.
- Simple for politicians to understand.

3.3.2 Scenario 2 Desalination

Innovation +

A dam at Peg Leg would provide storage serve water needs; however, it would not provide water security. We therefore propose exploring other ideas for climate independence. This may include Peg Leg and a shared desalination plant with Port Macquarie, which could be a future option.

In addition, we would take further steps to ensure new subdivisions use water in a smarter way, e.g. make grey water recycling mandatory in news houses and subsidise the purchase of rainwater tanks.

Rationale:

- This plan ensures water security plus a broadly diversified water supply.
- Powering the plant – there is potential for more future innovation to reduce operating costs.
- A desalination plant shared with Port Macquarie would provide a climate independent water source if underground water was not found.
- We could still look at off-stream storage potential for Gloucester, Bulahdelah and Stroud, plus aquifers. However, this is a climate-dependent source (depends on rainfall) and there is the potential for these smaller towns to boom.

3.3.3 Scenario 3 Purified Recycled Water

Re-using every drop - toilet to tap

The dam and recycled water solve water security and water recycling issues in one hit.

Rationale:

- We will get water storage, and for only \$85 million extra we are significantly increasing our water security.
- We are diversifying our water security sources that we rely on; dam plus recycling waste water.

3.3.4 Scenario 4 Water Sharing

Selling the scenario: benefits

Describing the scenario as “eggs in one basket” is scary terminology for the community. Describe it as a centralised system, it’s robust, well managed, and a bigger system will increase resilience.

It sets you up for future, new storage i.e. aquifer, dams, desalination.

Community education will be key to make sure that the community supports this scenario. Educate that the system would be more robust, resilient, and better run. Highlight that it would provide social equity.

Selling the scenario: the detail

- Sell the scenario by comparing the cost of the scenario without the add-ons i.e., recycling water, storage, and show the dollars per mega litres/yield.

- Community needs to be on board to guide Council to make the right decision.
- Suggested to recast the scenarios as: centralised scenarios vs decentralised scenarios, and then talk about add-ons (dial up or dial down effluent management options).

4.0 Conclusion and recommendations

4.1 Conclusion

From the feedback provided by the participants in the Our Future Our Water Workshop 2, there was no clear preference from the group on a preferred scenario. There were diverse views on all four scenarios. The most common theme from the feedback on the scenarios was cost, both cost for the rate payer, and return on investment regarding achieving water security.

Scenario 1 was the highest ranked option in the Mentimeter activity - individual scenario preference. Participants liked that the scenario would utilise existing infrastructure, is low cost, and has opportunities for renewable energy to offset costs. Participants had concerns about the environmental impact construction and operation of a dam may have. Questions were largely relating to when the dam would be built and whether recycled water would be considered as part of this scenario. It was recommended that Council explore recycled water for irrigation and groundwater harvesting as part of this option.

Scenario 2 was ranked third in the Mentimeter activity - individual scenario preference. Participants liked that the scenario provided a climate independent water security option and incorporates recycled water for irrigation. Participants had concerns about the energy requirements to operate the desalination plant as well as the high costs associated with construction and operation of the plant. There were concerns and questions regarding the environmental impacts of releasing concentrated brine into the ocean. It was recommended to share a desalination plant with Port Macquarie and build a short-term solution into this scenario.

Scenario 3 was ranked last in the Mentimeter activity – individual scenario preference. Participants liked that it was a cost-effective solution and that it combines immediate benefits of the dam and long term benefits of purified recycled water. Concerns were raised regarding public perception, lack of regulatory frameworks and limited water security. Participants had questions regarding whether the purified recycled water can be stored in tanks rather than in an aquifer or added to the supply network immediately.

Scenario 4 was ranked second in the Mentimeter activity – individual scenario preference. Participants liked that it provided water security to unserviced villages and increased water resilience by creating efficiencies and a better managed network. There were concerns about the construction costs and community and environmental impacts of securing easements for the pipeline. Questions were raised relating to connecting to Port Stephens and water contribution fees from unserviced villages. It was recommended to present the scenario to the community by emphasising water equity, a more resilient network, and cost per giga litre to clearly show value against other scenarios. It was also recommended to compare the scenarios without the recycled water options.

4.1.1 Follow up actions

The below follow up actions are recommended for Council:

- Comments and requests for information made in the workshop should be answered and circled back to the group.
- It is suggested that a FAQ document be prepared when Council calls for feedback from the broader community. This should take into consideration the questions, comments and requests for information from the workshop participants.
- Responses to key questions raised in the workshop should be included in material provided to the community as they may likely have the same questions.
- Council to consider briefing the community or community groups on the scenarios given the technical nature of the topic.
- Council to consider making the fact sheets publicly available so the community can fully understand the scenarios.

Appendix A

Workshop materials

Appendix A Workshop materials

AGENDA

Our Water Our Future Workshop 2 28 February 2023

Date	Tuesday 28 February 2023	Time	8:30 am – 3:30 pm
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Venue	Council Chambers Yalawanyi Ganya, 2 Biripi Way, Taree
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Meeting Items

Time	Activity
8:15 am	Arrival, registration and morning tea
8:30 am	Welcome to Country
	Opening and introductions
	Workshop objectives
	Highschool 'Hack for Water' Presentations
	Journey of the Our Water Our Future Strategy since Workshop 1
10:20 am	Short break
10:30 am	Scenario 1 Presentation and Q&A
11:15 am	Scenario 2 Presentation and Q&A
12:05 pm	Lunch
12:35 pm	Scenario 3 Presentation and Q&A
1:25 pm	Scenario 4 Presentation and Q&A
2:15 pm	Scenario rankings
3:00 pm	Next steps Close

List of participants

Name	Stakeholder group
Chris Taylor	Community
Kathryn Bell	Councillor
Simon Lund	EPA
Samantha Bonds	MidCoast 4 Kids
Gerard Tuckerman	MidCoast Council
Brendan Guiney	Water Directorate
Andrew Gow	Community
Jeremy Miller	Councillor
Jeanene Duncan	Forster Tuncurry Business Chamber
Debbie Olsson	MidCoast Council
Evan Vale	MidCoast Council
Megan Benson	Community
Geoff Snell	DPE Water
Jessica Leck	MidCoast 2 Tops Landcare
Prue Tucker	MidCoast Council
Kev Ellis	Wingham Chamber of Commerce
William Paulson	Community
Roshan Iyadurai	DPE Water
Sarah Johnston	MidCoast 4 Kids
Lillian Moseley	MidCoast Council
Philippe Porigneaux	NSW Health
Sue Calvin	MidCoast Council
Andrew Walker	Community
Grace Connor	EPA
Karen Bradley	MidCoast 4 Kids
Andrew Morris	MidCoast Council

Appendix G – Youth Hackathon for Water Summary Report

**Our
Water
Our
Future**





Our Water Our Future Report

MidCoast Council Chambers Taree
Friday, 11 November 2022

About this Hackathon

With a focus on engaging young people in the development of a long term water strategy for the MidCoast region, MidCoast Council hosted a one day hackathon with senior students from across the region.

Three areas were identified for this hackathon:

- Catchments and climate
- Sustainable effluent management
- Water security

Teams worked on each of these challenges.



Problem Statements

1. Catchments and climate

How might we reduce the impacts of climate change on our waterways and the urban water cycle?

2. Sustainable effluent management

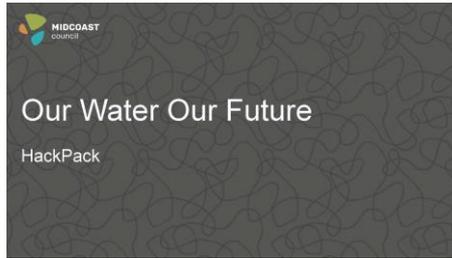
How might we maximise our use of recycled water and gain public acceptance of this decision?

3. Water security

How might we make sure we always have enough water for everyone and our natural environment?



Supporting the Teams



Run sheet - what happens

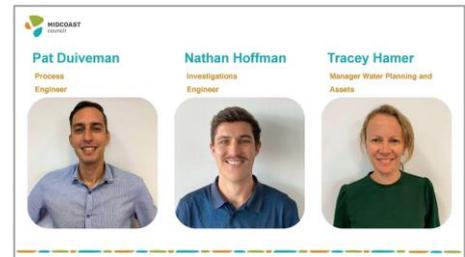
Time	Activity	Location	Time	Activity	Location
8:30	Registration and welcome drinks	Upper Hill, Green Fields, Green meadow	10:30	Business plan challenge teams	all
8:45	Registration and welcome drinks	Upper Hill, Green Fields, Green meadow	10:35	Networking break	all
8:50	Head for the hills - a water games, quiz and challenge	Green meadow	10:40	Qualification and award ceremony	all
9:00	Head for the hills - a water games, quiz and challenge	Green meadow	10:45	Final announcements and presentation	all
9:10	Networking and welcome drinks	Green meadow	10:50	Refreshments and get together	all
9:20	Networking and welcome drinks	Green meadow	10:55	Refreshments and get together	all
9:30	Networking and welcome drinks	Green meadow	11:00	Refreshments and get together	all
9:40	Networking and welcome drinks	Green meadow	11:05	Refreshments and get together	all
9:50	Networking and welcome drinks	Green meadow	11:10	Refreshments and get together	all
10:00	Networking and welcome drinks	Green meadow	11:15	Refreshments and get together	all
10:10	Networking and welcome drinks	Green meadow	11:20	Refreshments and get together	all
10:20	Networking and welcome drinks	Green meadow	11:25	Refreshments and get together	all
10:30	Networking and welcome drinks	Green meadow	11:30	Refreshments and get together	all



A “HackPack” was produced and shared with the students. They could access this online during the event or as pre-reading before the hackathon.

At the hackathon, mentors helped the teams work through the challenges and validate their approaches.

The Shared Value Canvas helped students rapidly develop focused solutions to the challenges.



Our Judging Panel



Claire Pontin - Mayor



Claire's objectives as a Councillor are to use her skills and experience to see the MidCoast region grow and prosper in a sustainable, culturally rich and diverse way.

Claire was first elected to Council in 2017, was elected Deputy Mayor in September 2019 and in September 2020 and was elected Mayor in January 2022.



Ellie Rourke - Student Activist



Ellie is passionate about conserving the environment and communicating science. After graduating from St Clare's Taree in 2020, Ellie has just completed her second year of a double degree in Science (majoring in biodiversity and conservation) and Arts (majoring in film, media and cultural studies) at the University of Newcastle.

Ellie hopes to combine her skills in science and arts to conserve the environment and promote action on climate change. She has played a role in organising and participating in several School Strike for Climate actions in Taree and Newcastle.



Brendan Guiney - Water Directorate



25 years in water and sewerage engineering and general civil works in a local government environment on the mid north coast of NSW, including

- 22 years experience as a team leader
- 17 years experience as senior manager.



Uncle Will Paulson



Uncle Will Paulson is a community leader and local Aboriginal elder. He is also a member of the Our Water Our Future Community Panel.



Hailey Trudgeon - Young Citizen of the Year



Hailey Trudgeon is the Community Development Youth Officer at MidCoast Council. She was named Young Citizen of the Year during the Taree Australia Day awards for her work with the Old Bar Early Learning Centre in coordinating the compilation of the children's and families' stories of their experiences during the bush fires in 2019.

Hailey is studying towards a Bachelor of Human Services, specialising in children, youth, families and communities.



Teams and Ideas

Teams and Ideas

Big Man Table (1st Place) **Taree High**

Jack Power
Sam Croker
Timothy Bischofberger
Annie Chen

PROBLEM THEY ARE SOLVING
Challenge 1, Water Security



Big Man Table

R.R.A.I.N. (Riverbank Revitalisation A.I. for Nature) - Planting mangrove tree seeds via drones to help stabilise river banks for carbon credits.



Teams and Ideas

Ducks (2nd Place)
Great Lakes College Forster Campus

Maddie Edenhofner
Stevie Caldwell
Lucy York
Grace Wicks

PROBLEM THEY ARE SOLVING
Challenge 3, Climate Change



Ducks
'FixaFlood' utilising wetland plants to improve water quality by trapping sediments, filtering out pollutants and absorbing nutrients that would otherwise result in poor water quality.

Teams and Ideas

Water Whizzys (Highly Commendable)
MVAC (Mountain Valley Anglican College)

Taylee Ede
Emily Tipton
Bree Kington
Seana Hedges
Hayley Callaghan

PROBLEM THEY ARE SOLVING
Challenge 3, Climate Change



Water Whizzys
Pyro-H₂O using the build up of biosolids in sewerage systems to create useable biofuels.



Teams and Ideas

Wingham Water Warriors (WWW.)
Wingham High School

Tai Urquhart
Adelina Johnson
Jessica Bisley
Bailey Mercer
Dustin Green

PROBLEM THEY ARE SOLVING
Challenge 1, Water Security



Wingham Water Warriors
'Bubbly Pool Solution' Recycle water for use on farms, parks and sports fields.

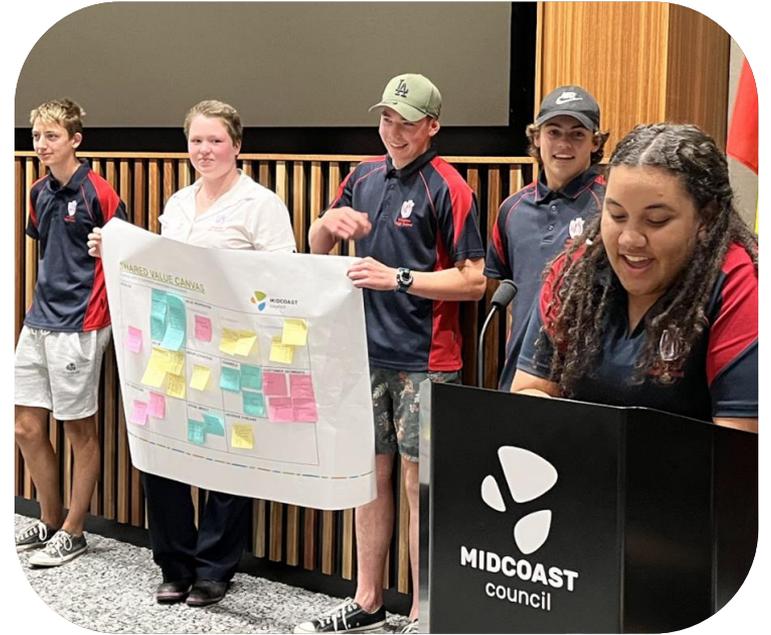


Teams and Ideas

Wingham Wallabies
Wingham High School

Mason Lewis
Amy Gee
Sienna Ratcliffe
Kyle Marron
William Hansen

PROBLEM THEY ARE SOLVING
Challenge 1, Water Security



Wingham Wallabies

A Hydro Energy and desalination plant that can power its own filter with a renewable power source e.g. solar panels.



Teams and Ideas

The Milkmen Great Lakes College

Jake Koller
Lucas Guiney
Luke McNeil

PROBLEM THEY ARE SOLVING
Challenge 2, Effluent Management



The Milkmen

'Imagine water' - Maximising recycled water usage through a community acceptance campaign alongside a cheaper pricing model.



Teams and Ideas

H2O Just Add Water **MVAC (Mountain Valley Anglican College)**

Madison ten Bosch
Sophie Parks
Annika Doolan
Bailey Clarke

PROBLEM THEY ARE SOLVING
Challenge 1, Water Security



H2O Just Add Water
B.S.M.A. (Better Solutions Made for Aqua) -
Build 2 Underground water plants; 1 filled with
groundwater and 1 filled with recycled water.

Teams and Ideas

Wolves of the Midcoast **MVAC + MCCCC**

Rana Muhammad Ashir Sultan
Harry Woodlee
Justin Colville
Malachi English
Lachlan Babington

PROBLEM THEY ARE SOLVING
Challenge 1, Water Security



Wolves of the Midcoast

Government subsidised water tanks to make the community less reliant on public infrastructure. Incorporating a social responsibility initiative and a 'smart water' system.

Teams and Ideas

M.C.
MVAC + ST. Clare's

Leilani Bussey
Eli Ruff
Makayla Boere
Makayla Saunders
Jessica Pryke

PROBLEM THEY ARE SOLVING
Challenge 1, Water Security



M.C.
I.W.S. (Internal Water System) 2 water tanks for each household (1 with rain water, 1 with waste water) solar panel installation to power.



The Next Steps

While some of the proposals developed by the teams were ambitious in scope (and budget), they did show considerable creativity and problem solving.

We would recommend presenting snapshots of each of the projects to the Community Committee. And we'd also recommend having the winning teams present live in person.



Question left on everyone's mind ...

Sustainable Effluent Management challenge owner and Process Engineer Pat Duiveman left us with an unanswered question ...



Which was the drinking water and which was recycled water?



The MidCoast Council services the Midcoast region which is a large and diverse region of 195 towns, villages and localities. The MidCoast ranges from beaches to mountains over an area of 10,000 square kilometres.

MidCoast Council Mayor is Claire Pontin. The MidCoast is home to the Gathang speaking Aboriginal people, the Biripi and Worimi.

They have a population of approximately 93,800 people living in around 40,000 households. There are two main population centres, Taree and Forster-Tuncurry.



MIDCOAST
council



Contact information

Who to contact?

Council contact:

Sara Wilson (Community Relations and Education Coordinator)

Phone: 0409 339 518

Disruptors Co contacts:

Gavin Heaton (facilitator)

Phone: 0421 470 365

gavin@disruptorsco.com

Shannon Bourke (facilitator)

Phone: 0435 010 623

shannon@disruptorsco.com





Thank you!

This hackathon would not have been possible without the support of our partners, teachers, judges and mentors who have helped us and continue to help us reach deep into and engage with communities to initiate change.

Appendix H – Children’s illustration competition entries



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

We can have a Drink of water



Name: Addi Reed

Age: 8



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

it helps our plants and trees grow.
Without trees and plants we would
have no air.



Name: Alex Galton

Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

It is important because it keeps you hydrated at all times!



Name: Alexis D

Age: 6



Alexis

WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

It's good to drink if it's clean.
And you should drink clean water to
be hydrated.



Name: Alexis

Age: 8



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

because if it is hot you need it



Name: Ariya
04/3/22

Age: 8



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Everyone and everything needs it to survive. Our world revolves around the water. It is the resource we need most.



Name: *darlee*

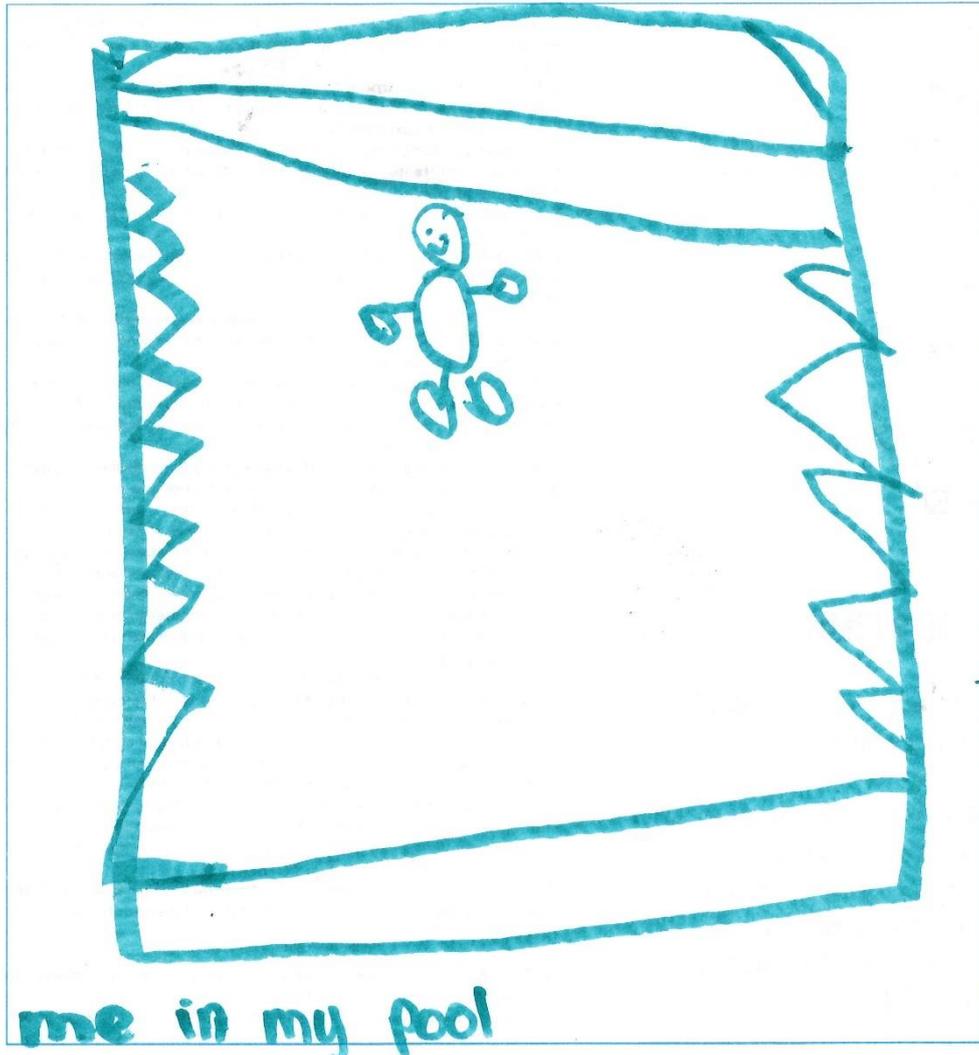
Age: 11



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

if I dont have water I can get
WOULD BE. really sick.



Name: Bailey

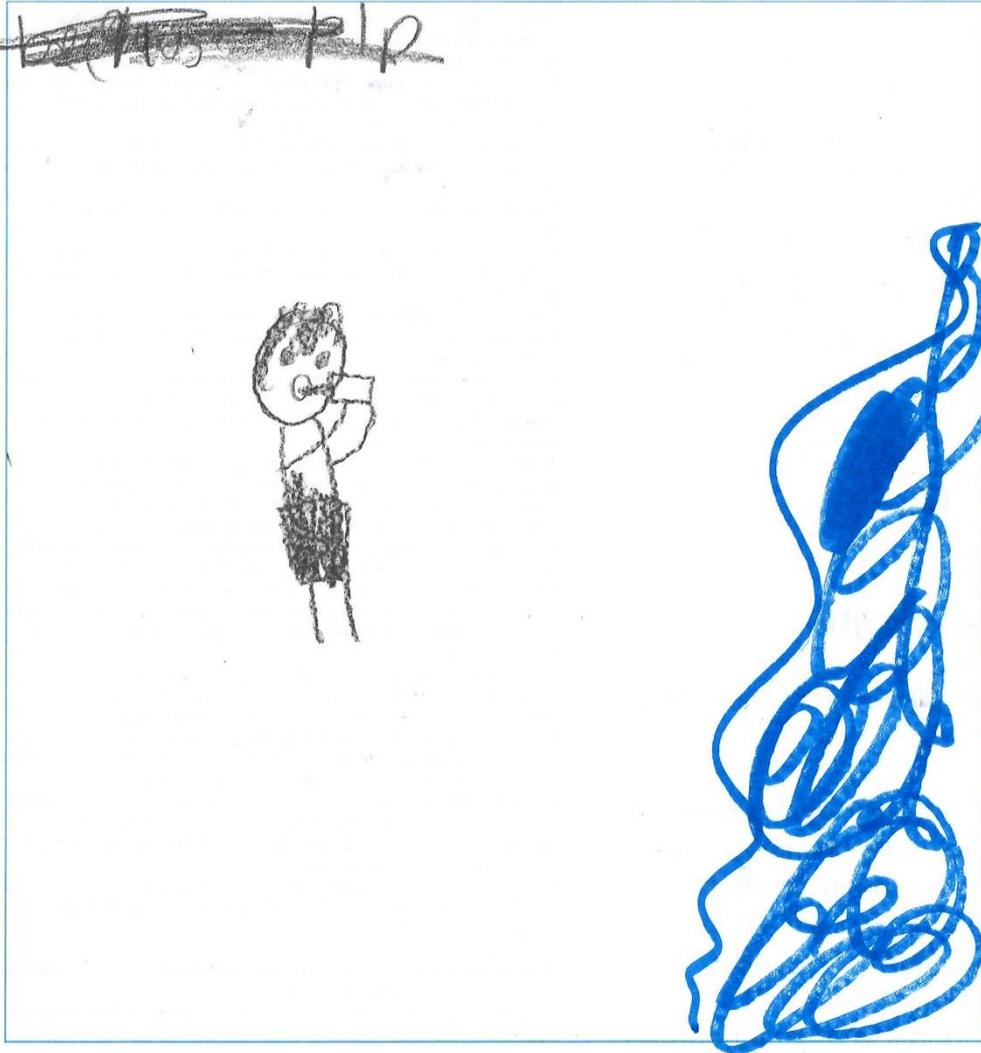
Age: 6



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

because people need to drink
it to survive



Name:

Bella

Age:

9-10

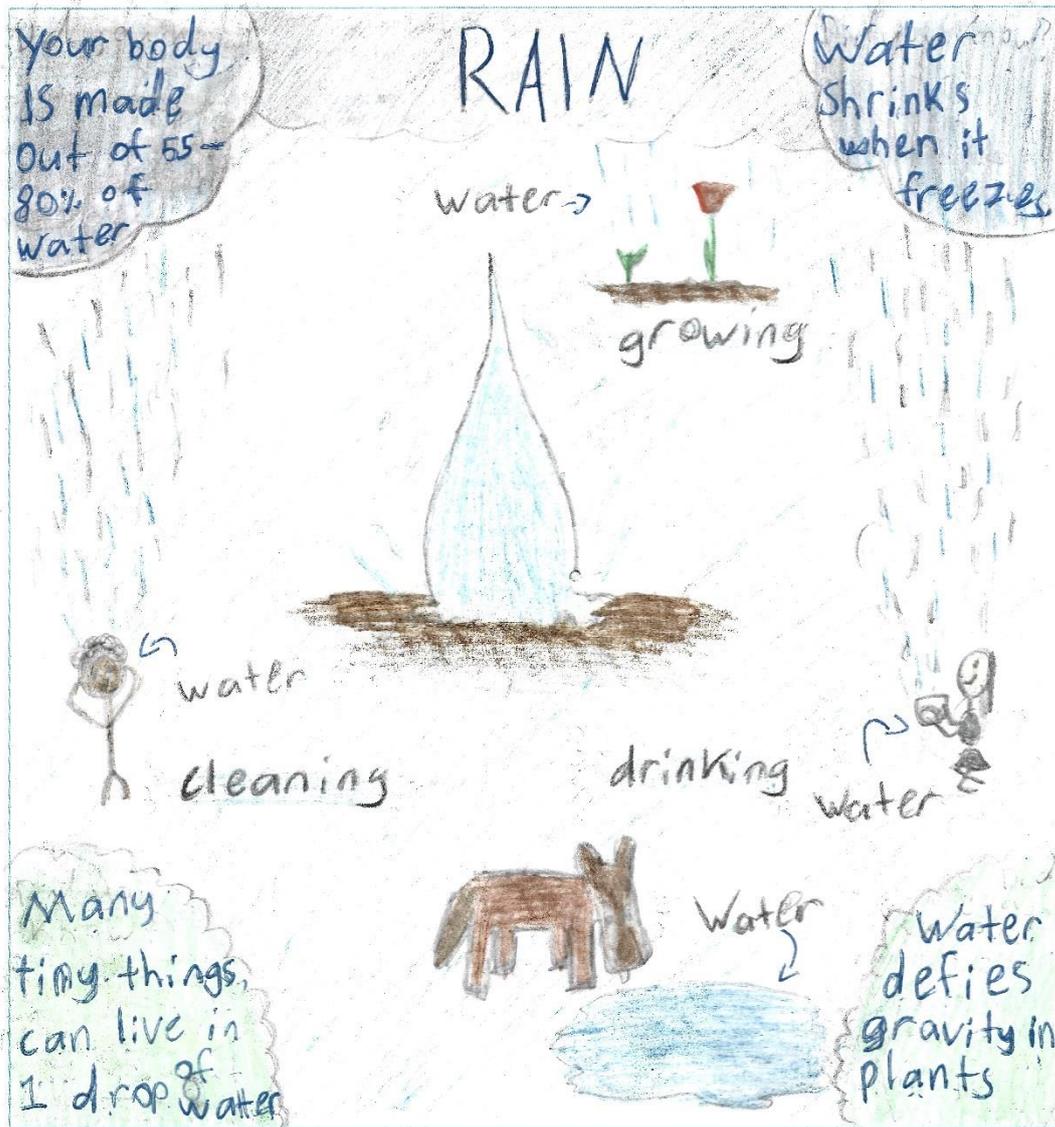
Our
Water
Our
Future



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because it hydrates, washes & is used by people and animals everyday.



Name: Bella Brown

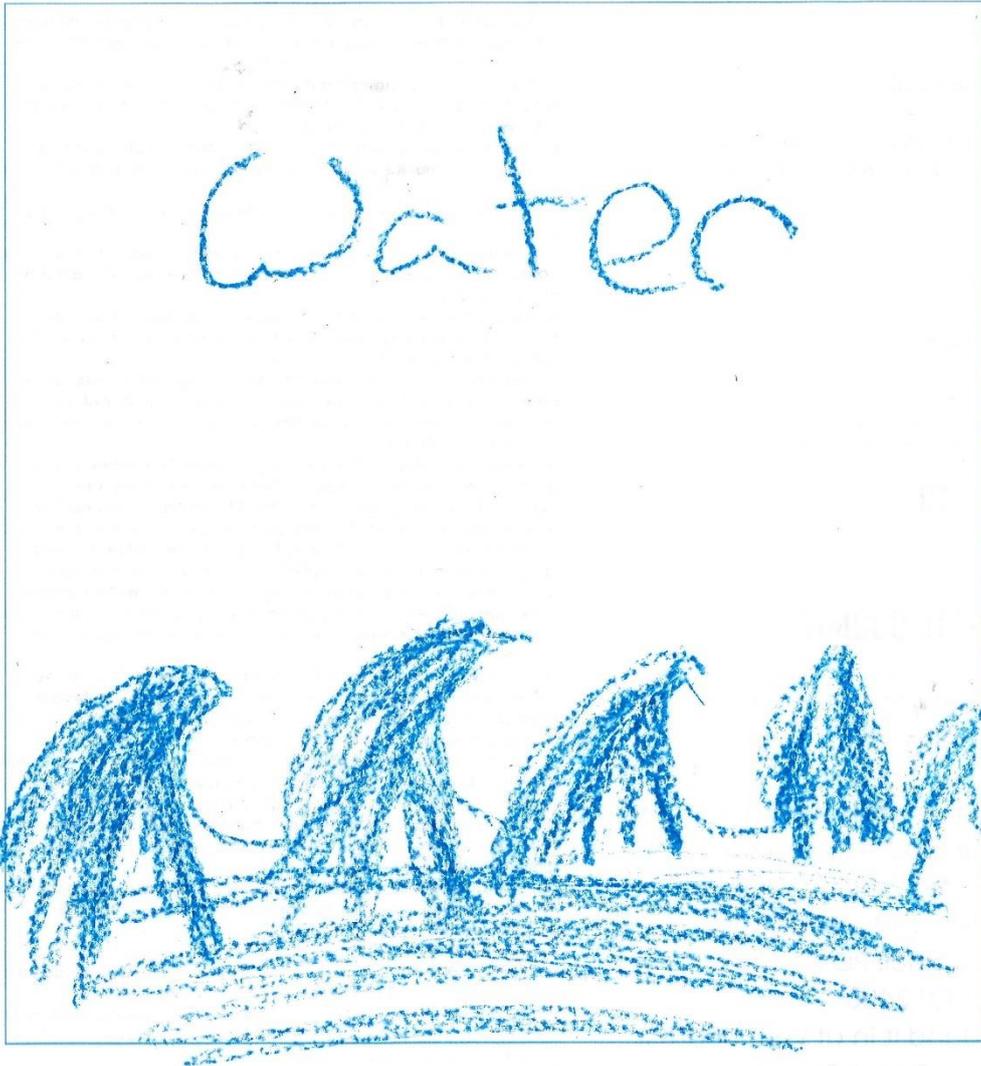
Age: 10



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

You need to drink



Name:

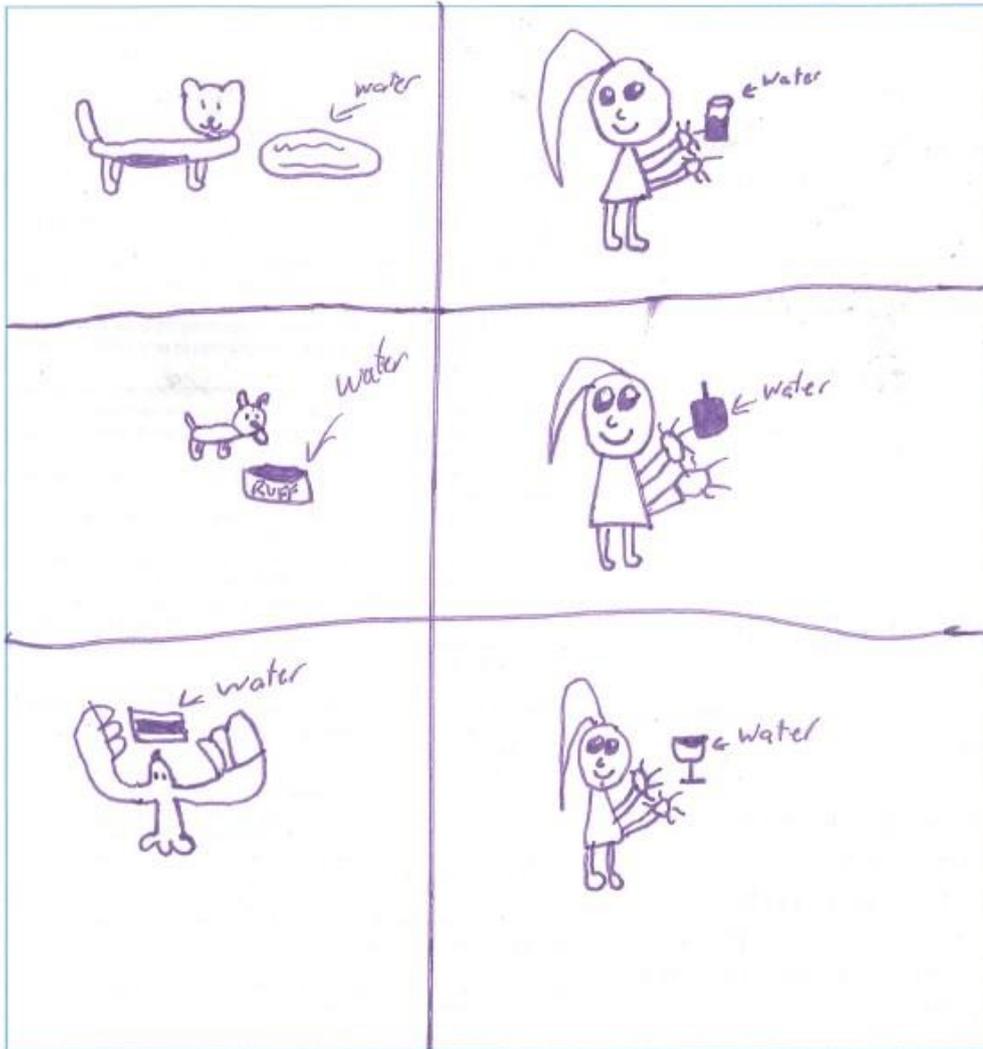
Age:



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water we need to make sure we don't run out of water because people and animals need it.



Name: Cadence Hamilton Cadie Page Age: 8



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

It helps grow our plants and keeps us hydrated.



Name: Charlie

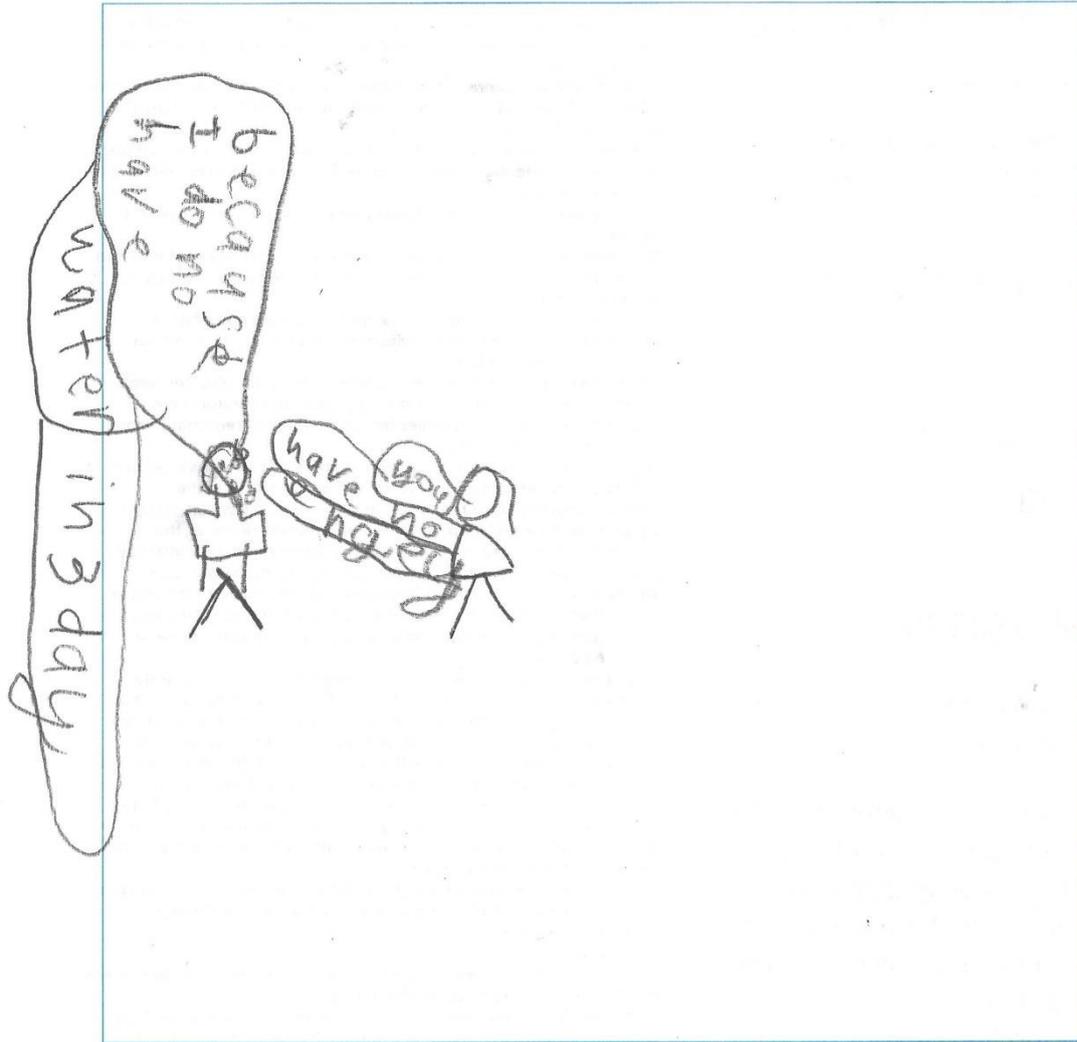
Age: 12



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

because 3 days with no water you will do not have



the
e
n
g
e
J
M

Name: charlotte

Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because it keeps us alive



Name: cody

Age: 12



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

It is good for everybody
and their health.



Name: Cooper H

Age: 8



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

it helps to give you a
you need it to live



Name: courtney

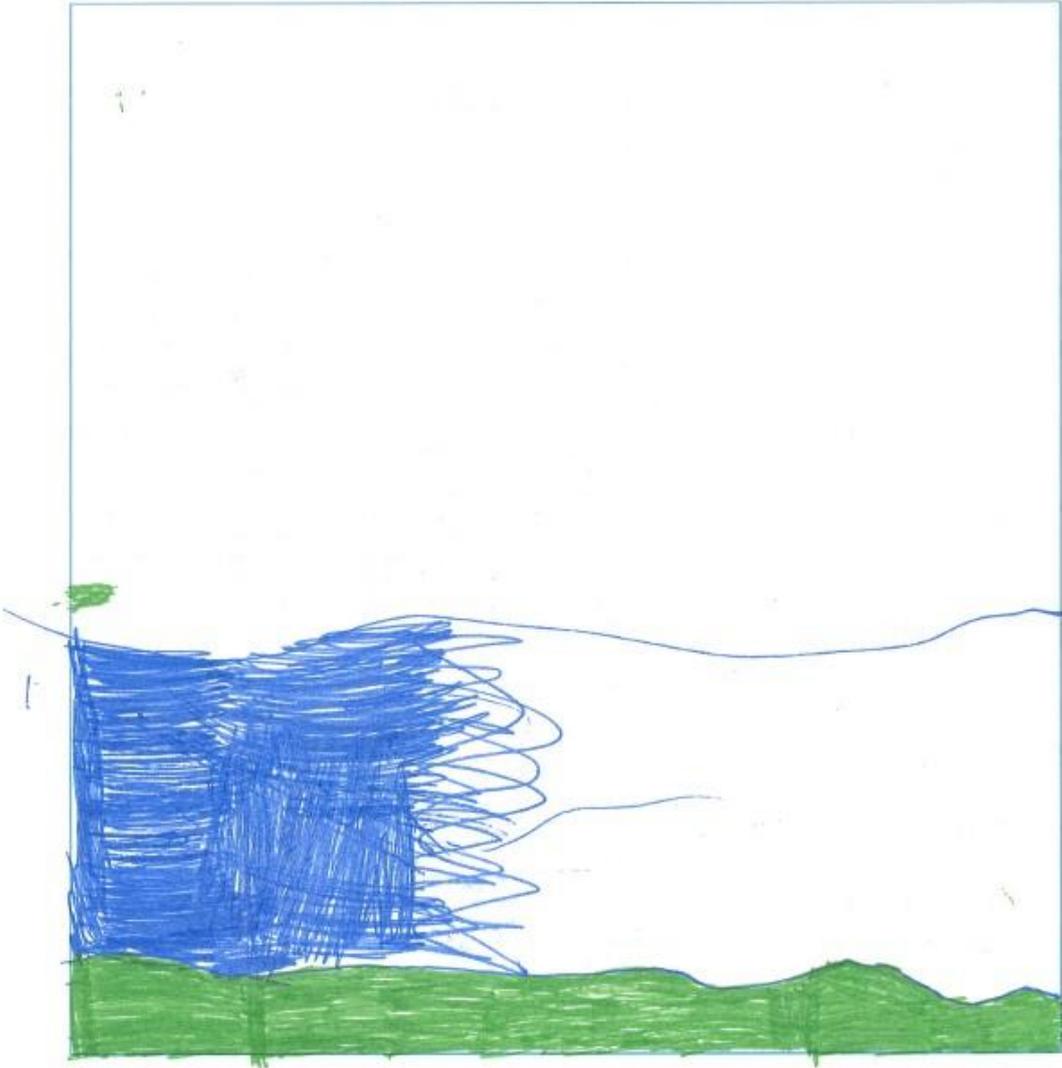
Age: 8



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because we are mostly made of water.



Name: Duke

Age: 9



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

you get to drink it



Name:

Age:



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

animals need it to survive.



Name:

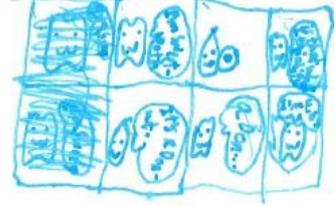
EVAB.

Age: 6





WATER IS IMPORTANT BECAUSE...



Finish the above sentence and then illustrate your answer in the box

Water is important because if there was no water then all of the creatures that live in water would not exist and we would die because of dehydration.



Name: Evelyn Mapperson

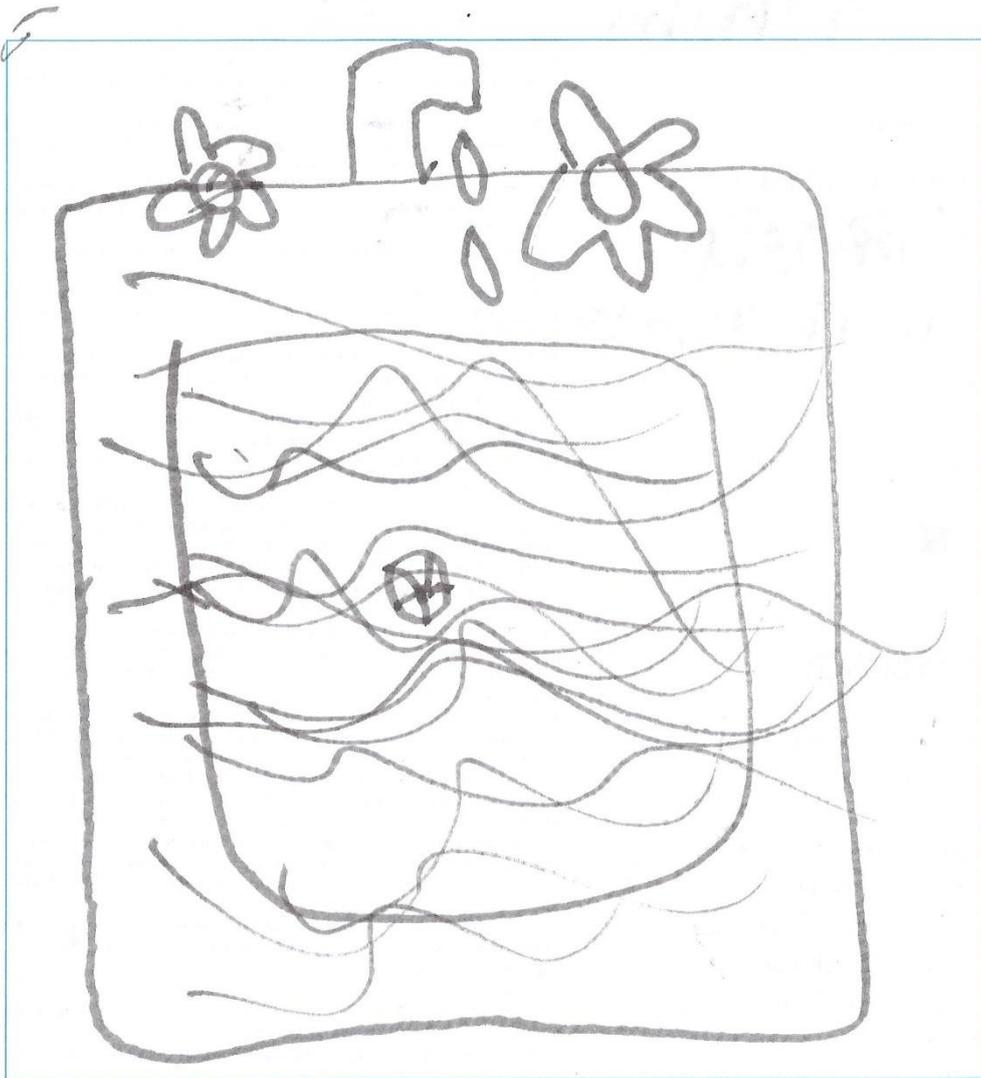
Age: 9 turning 10



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

it keeps you alive not dead



Name: Hannah

Age: 8



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

The world needs it to keep people
alive.



Name: Harper

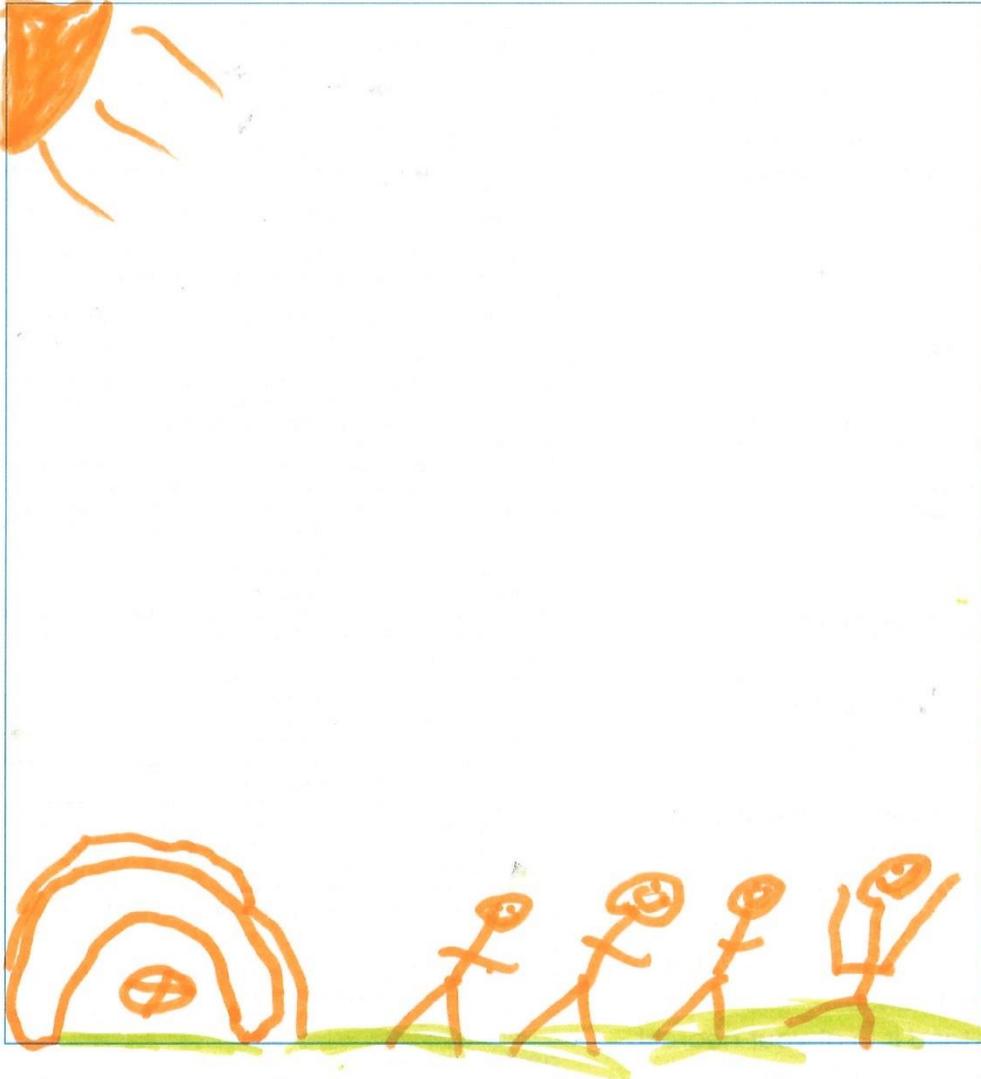
Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

when I play soccer
I need water



Name:

Harvey

Age:

7

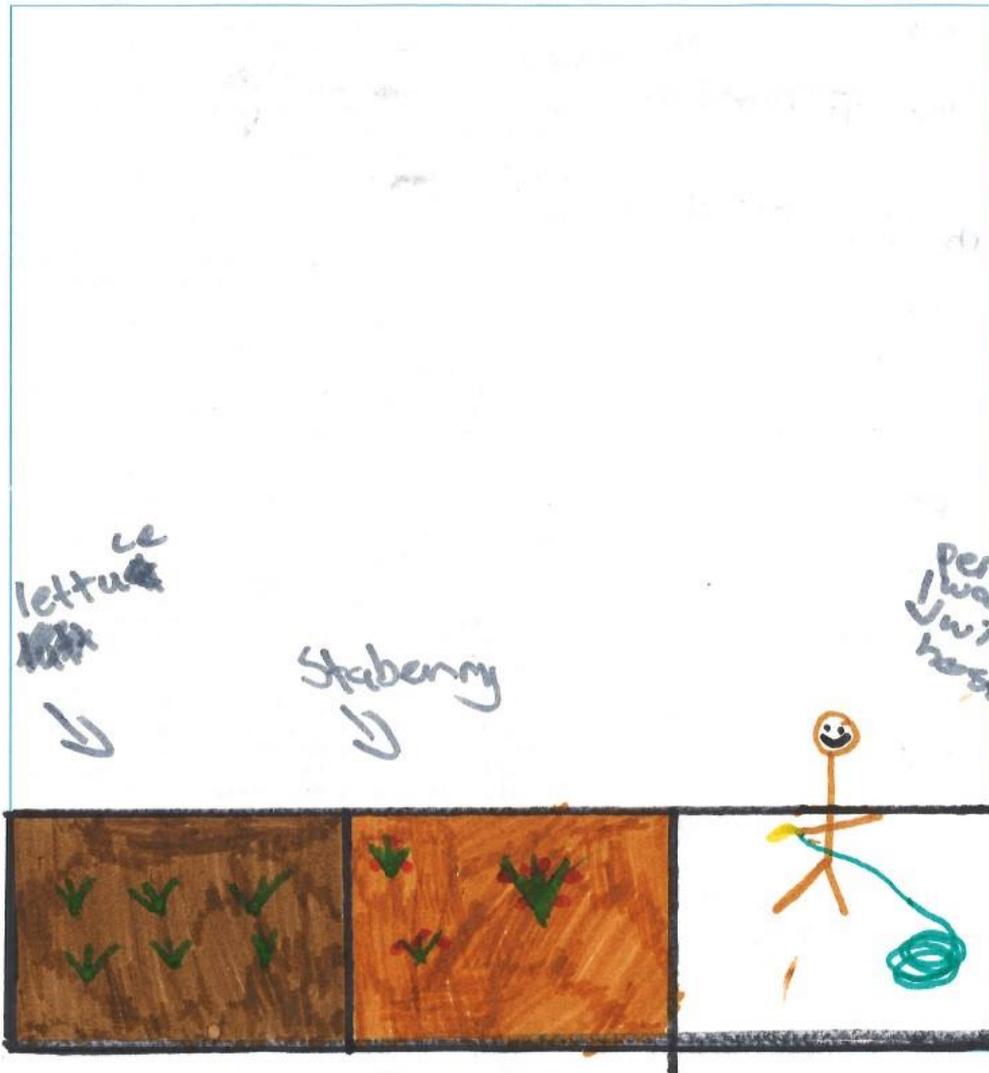
Our
Water
Our
Future



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

It helps feed crops on farms and is a
critical ~~product~~ product.



Name: Hayley young

Age: 10



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

We need water for our pets
to stay alive.



Name: Heidi

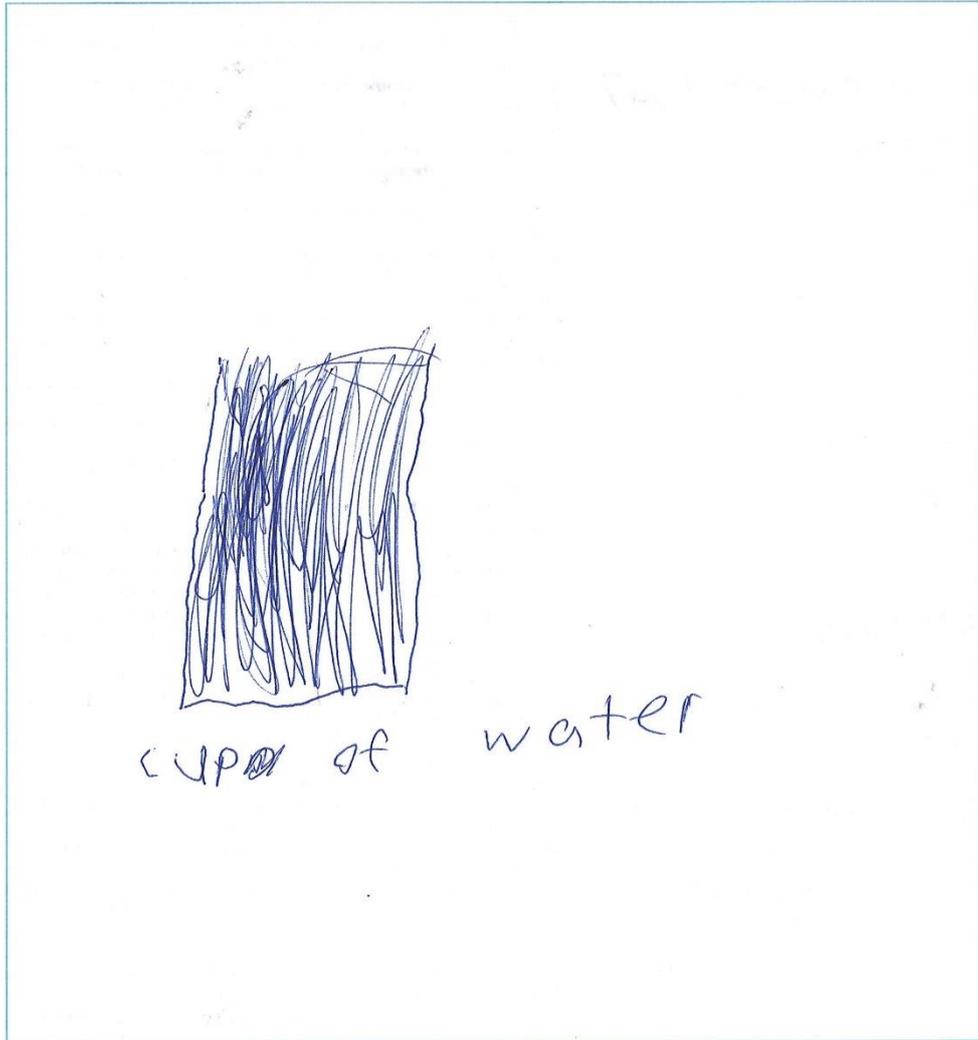
Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

it keeps you alive



Name: hunter

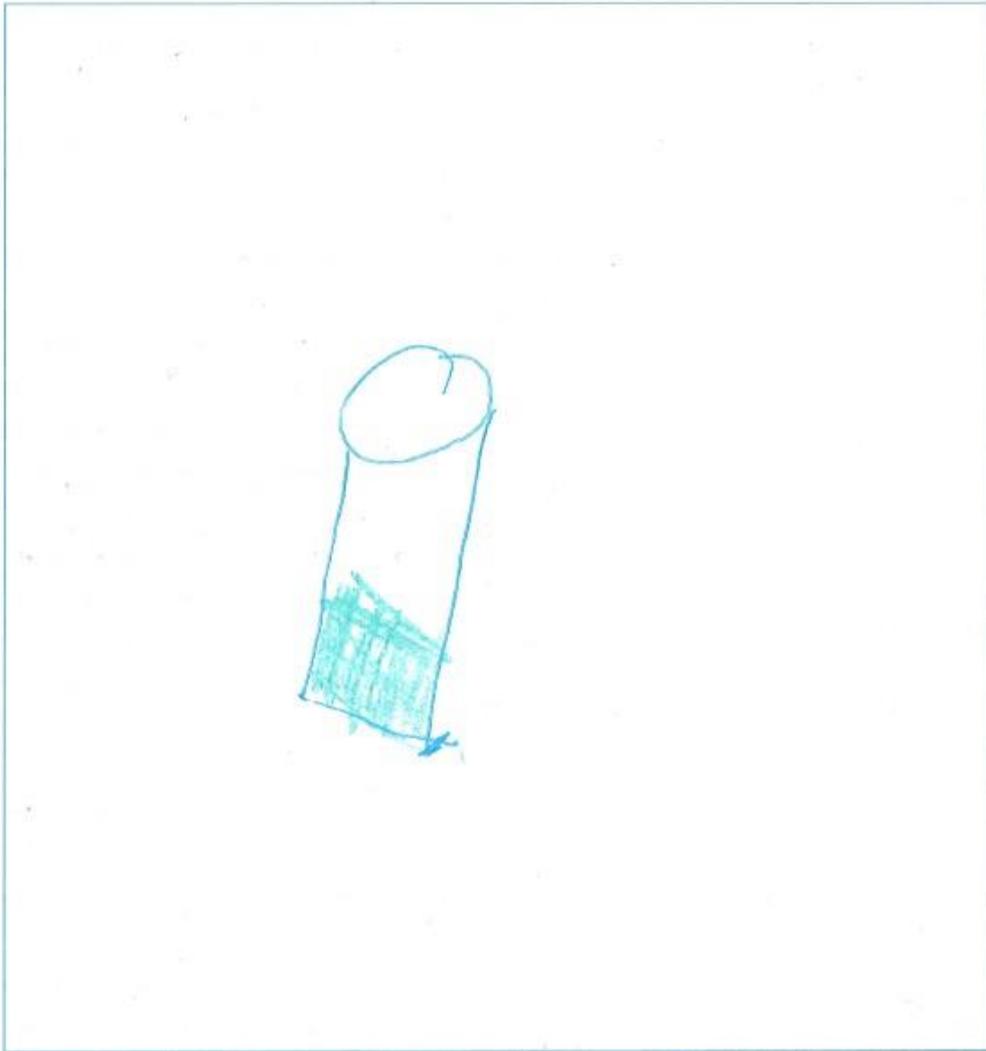
Age: 9



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

you need water because
to drink



Name: Illiana

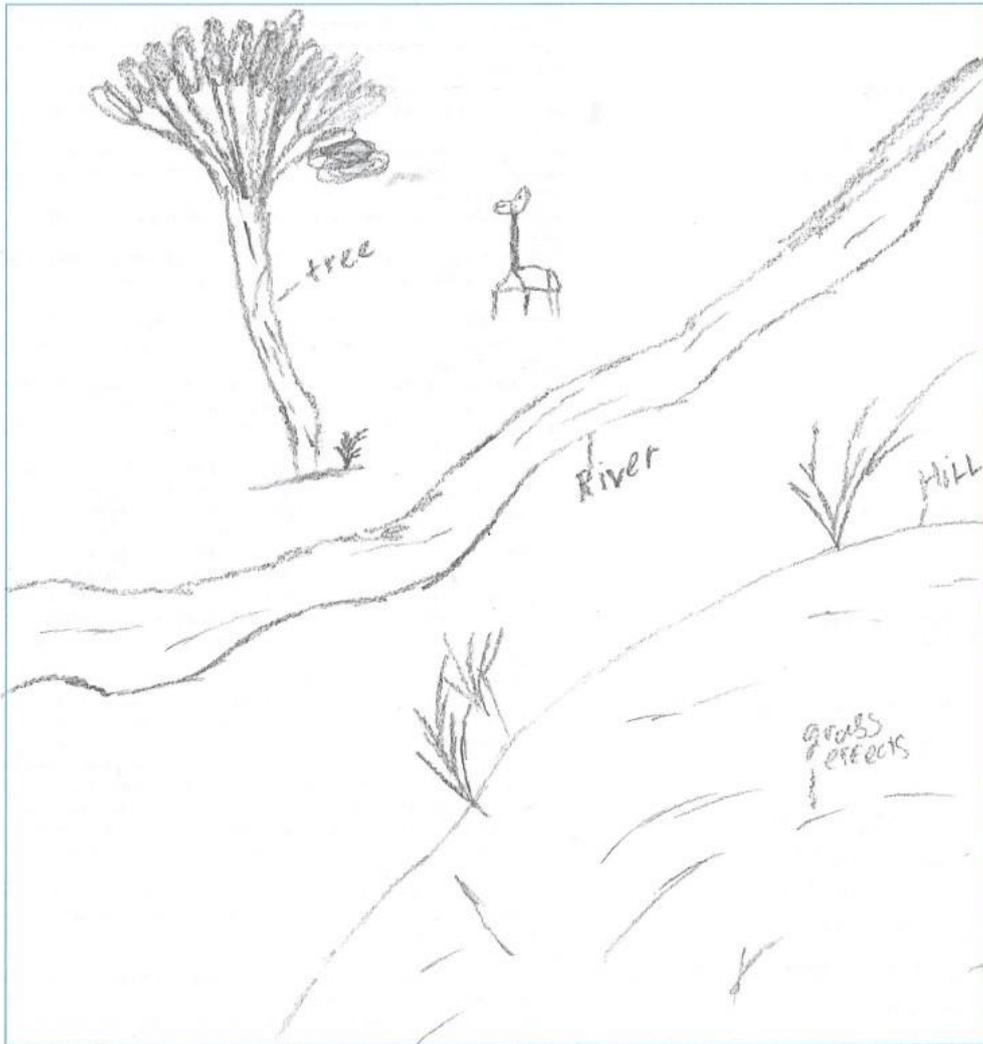
Age: 10



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

WATER IS important because every living thing lives with it!



Name: ISAAC

Age: 9



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

It helps you stay hydrated and keeps
your body working.



Name: Isabella

Age: 11



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because you need water to survive and to be hydrated.



Name: Fvy.w

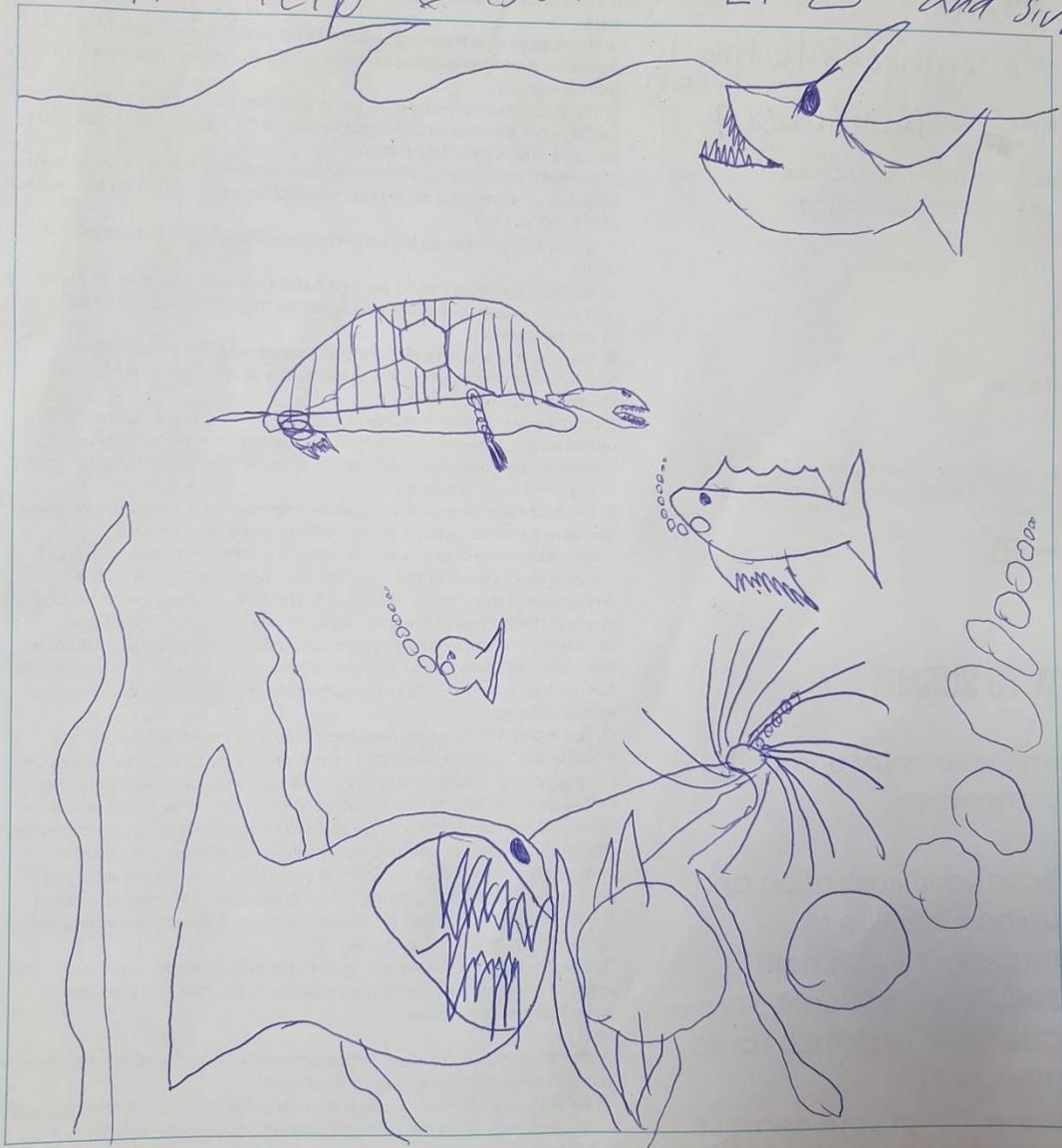
Age: 9



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

~~its healthy for you~~ its
healthy for you and others.
it helps you live and survive



Name: Jace

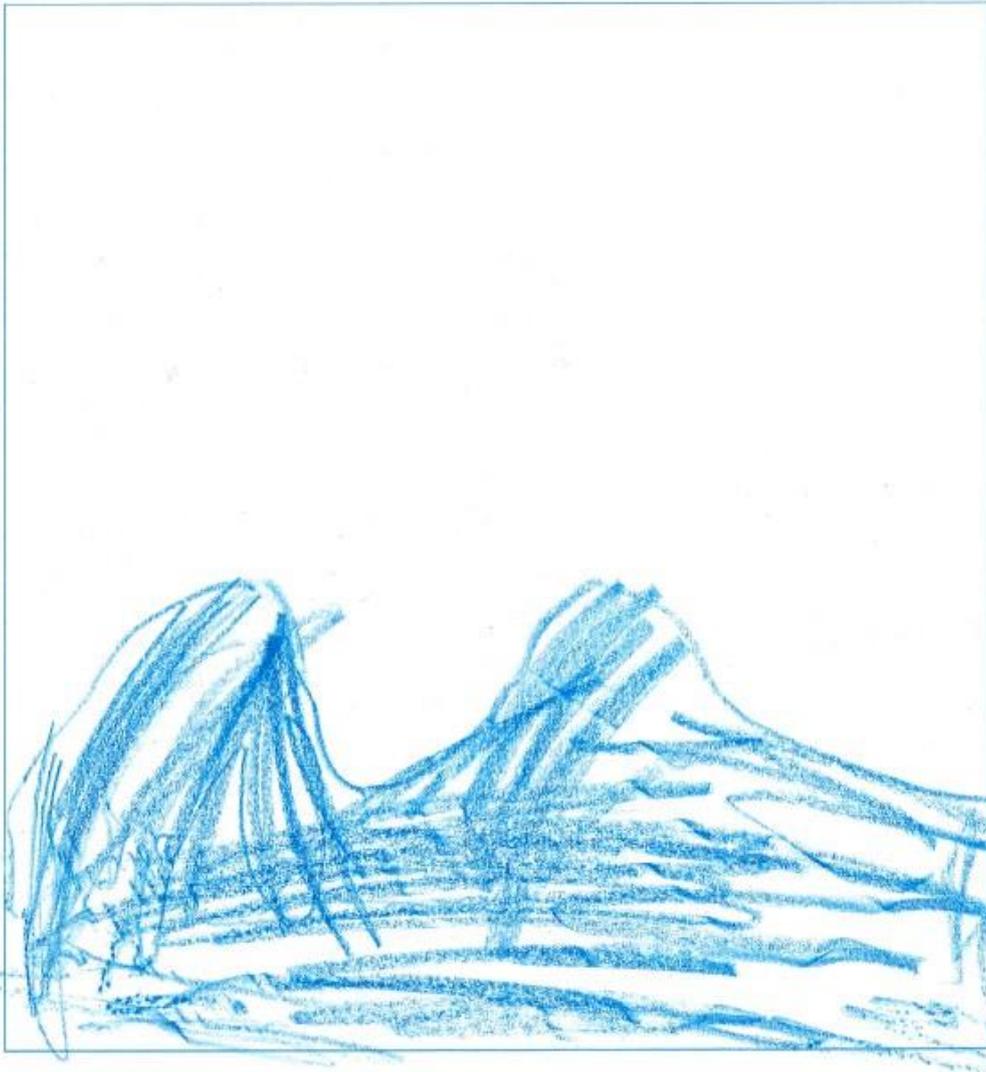
Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

You need to drink.



Name: James

Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because without water on earth we would die, and our throat would go all dry without water.



Name: Jaxon

Age: 9



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

cause you drink it so you
dont die.



Name: Jem

Age: 6



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Because we have to drink it



Name: *OS-284*

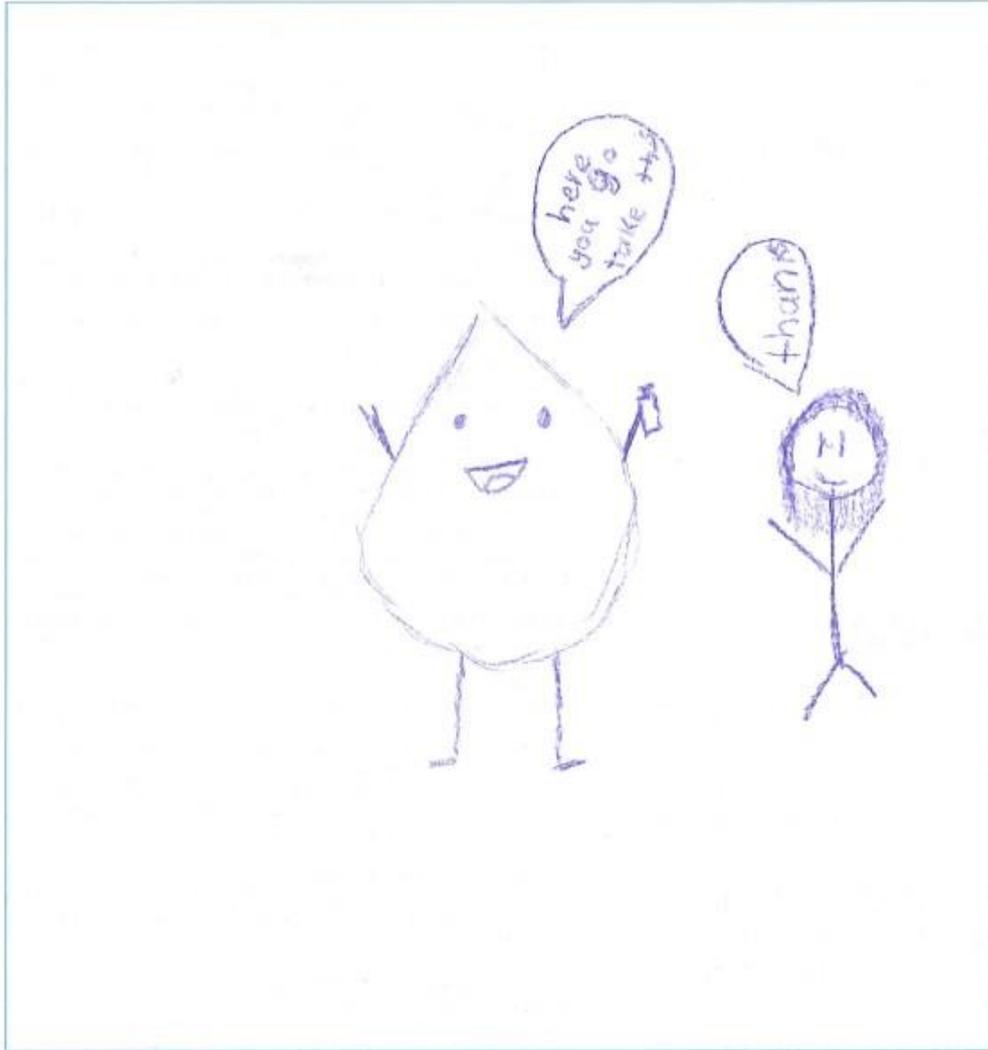
Age: *10*



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

you will ~~not~~ last 3 days with
out it



Name: Kyla on

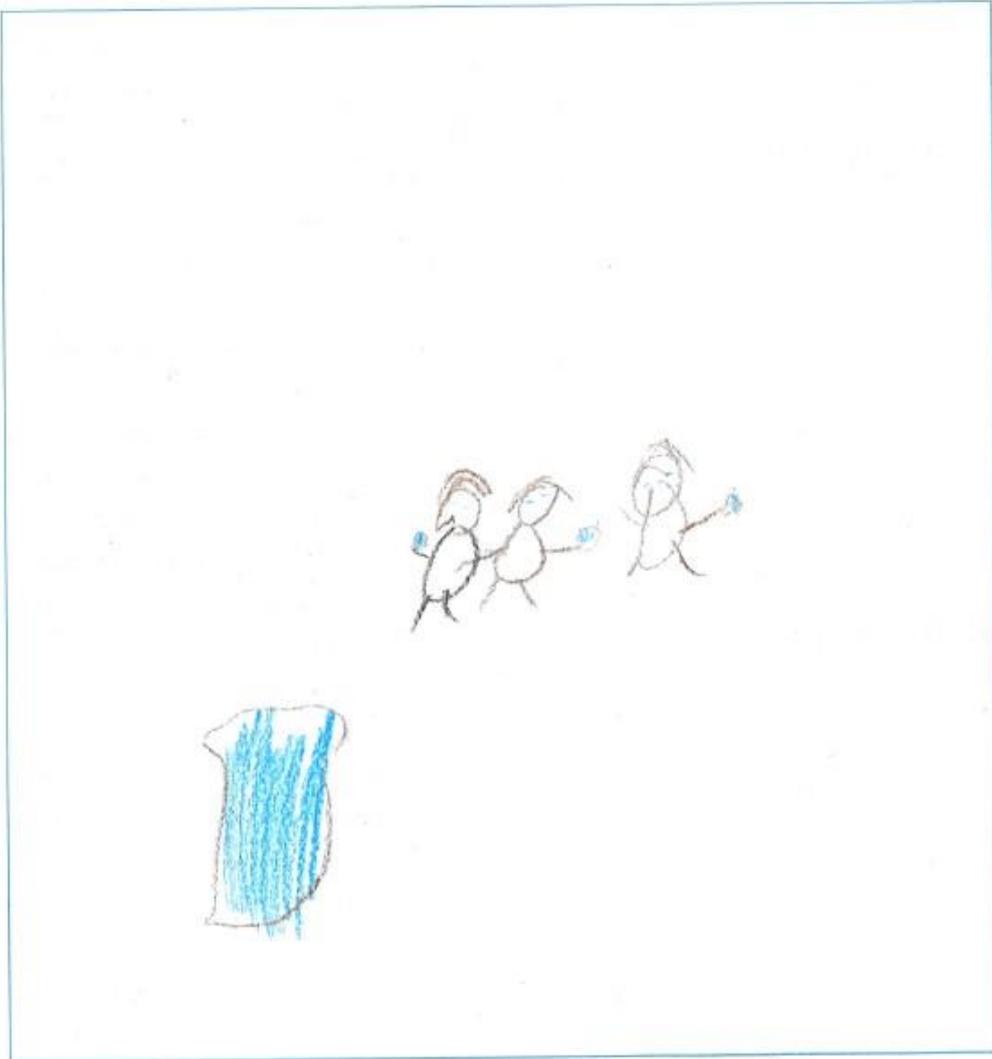
Age: 11



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

it gives us hydration



Name: Iachlan

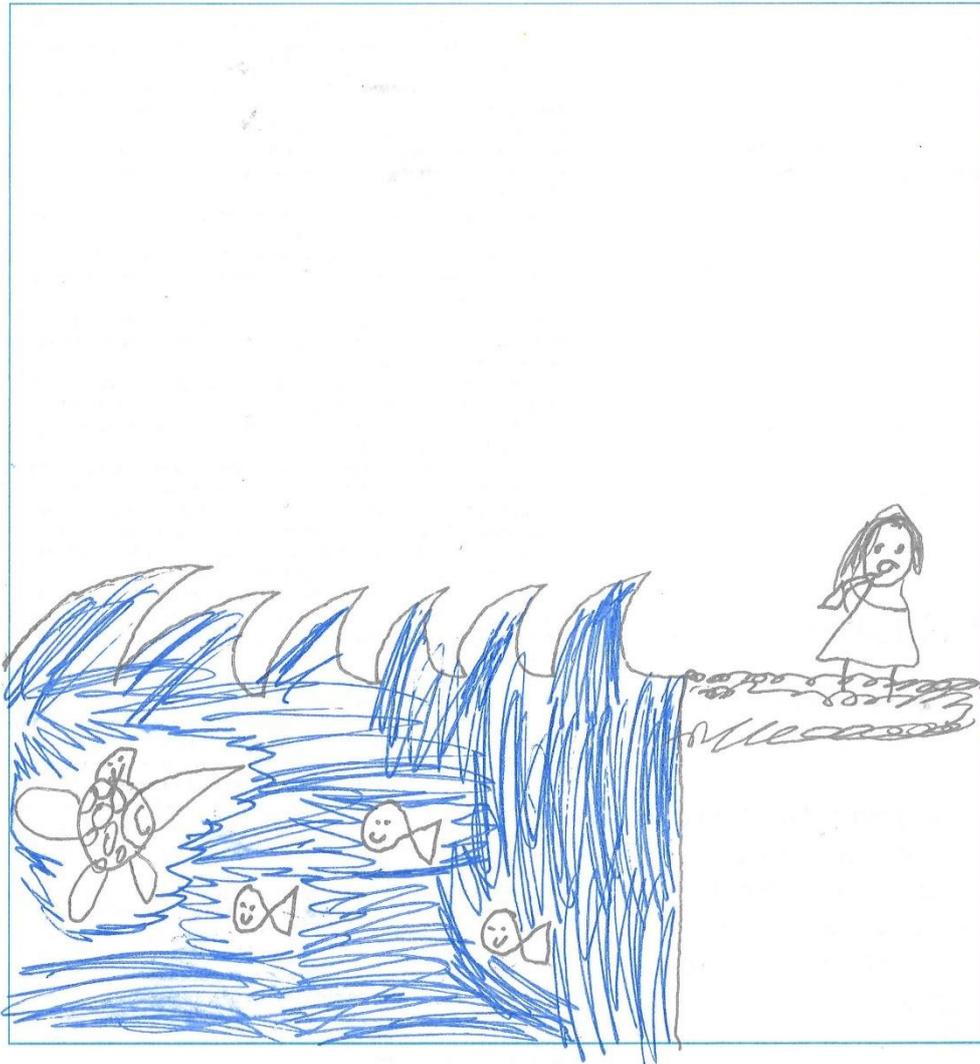
Age: 9



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because we can stay high draitid and
So that sea animals can have some water to
live in.



Name: Lexi S

Age: 9



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because you need it
to live. It also helps the world, but
it can freeze you, boil you but you still
need it.



Name: Lilliana

Age: 11



lucas / lucas
lucas

WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

It's good to ~~drink~~ drink to be high
grated



Name: lucas

Age: 9



WATER IS IMPORTANT BECAUSE...maci

Finish the above sentence and then illustrate your answer in the box

It's good to drink if its clean
And you should drink clean
water bc hydrated.



Name: Maci

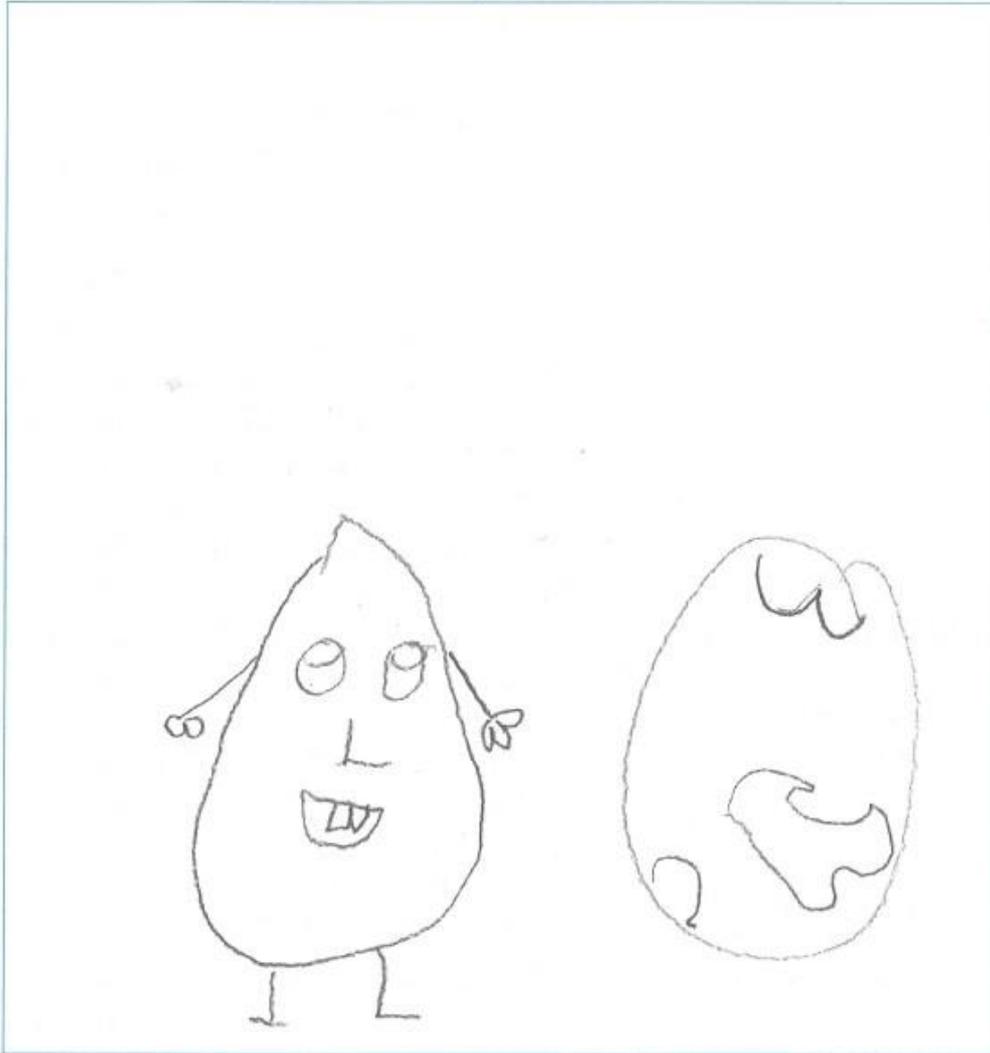
Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

to help the world



Name: Marley, n

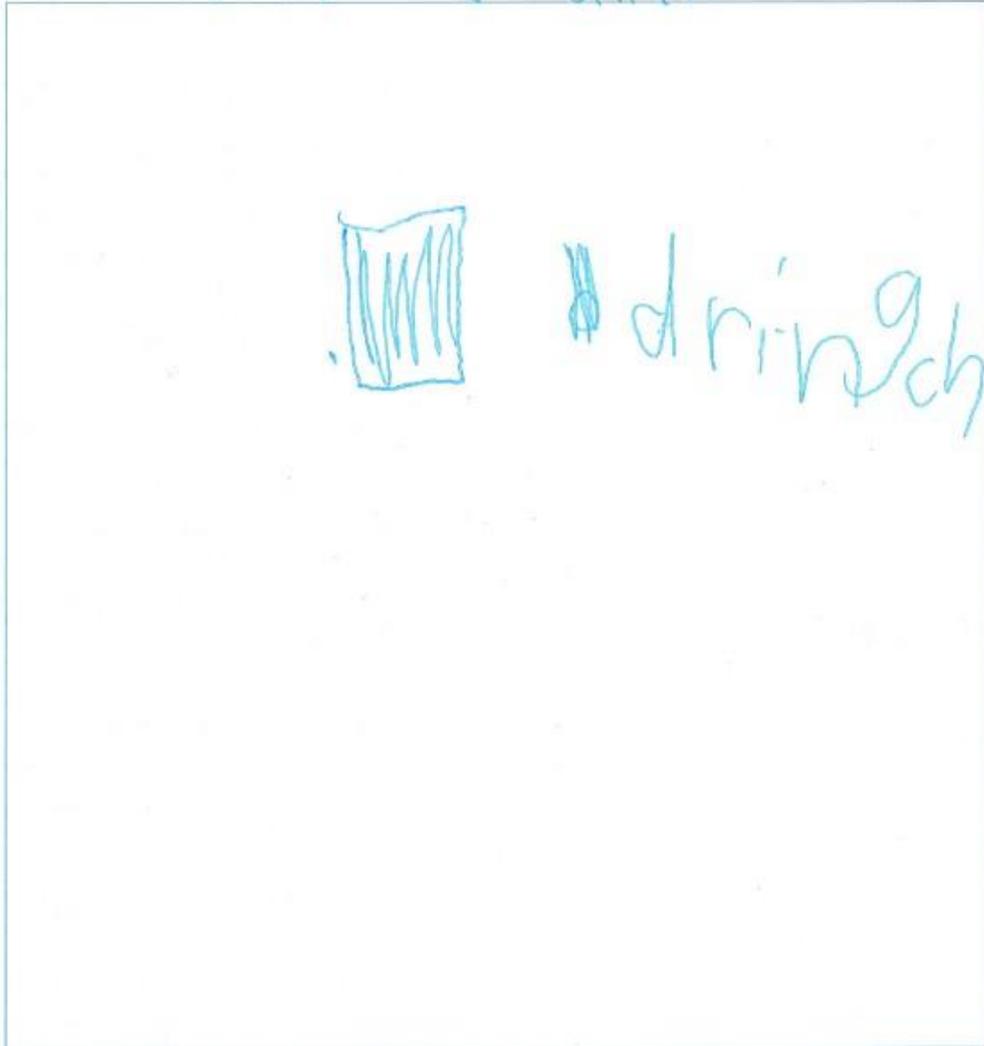
Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because
it keeps us alive



Name: Marley

Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Because it helps us live



Name: Nate

Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

you might get sweaty



Name: Oliver

Age: 6



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because it helps us stay alive, it also cleans us just as long as you use soap. It also keeps animals alive. It also helps feed our plants.



Name: **Olivia**

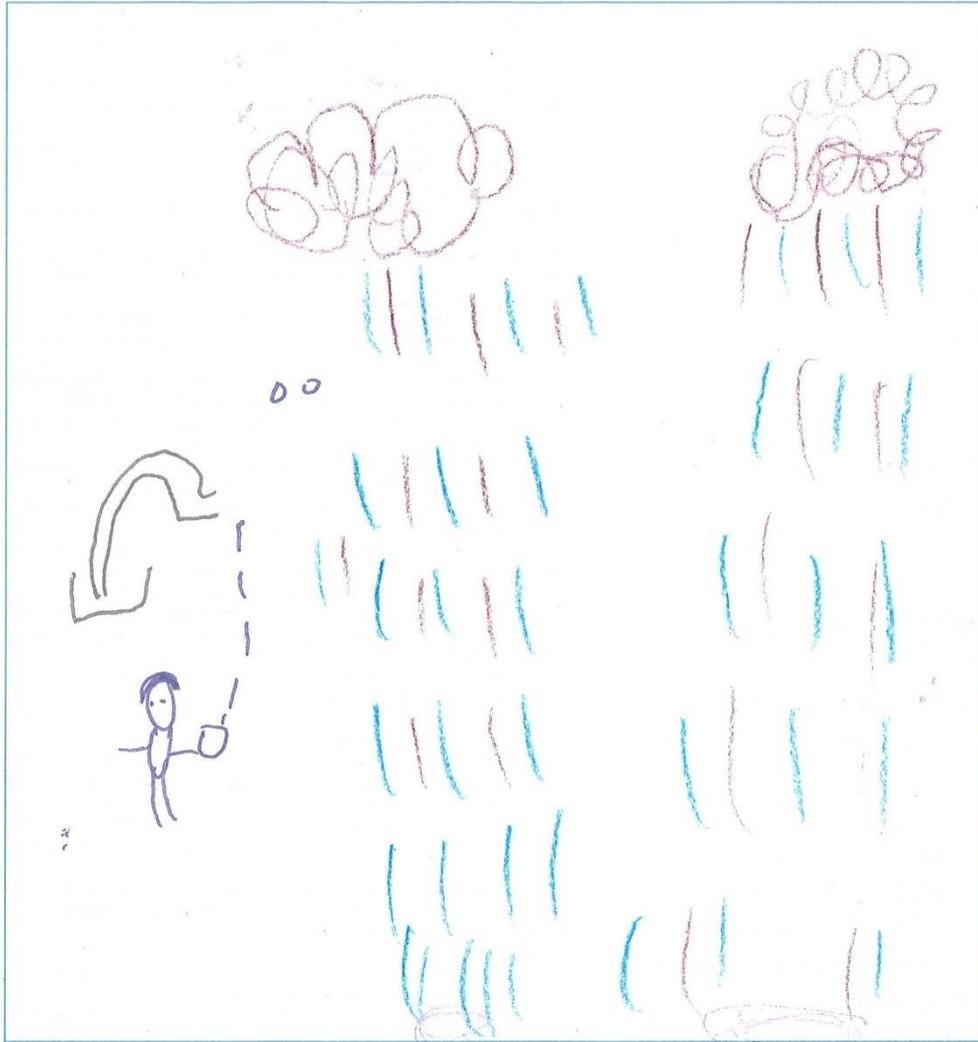
Age: **10**



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

if theres no water youll get Hot
and youll die.



Name: Reid

Age: 8



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

~~water~~ water can kill us to ~~the~~ death
drown us to ~~the~~ death but we ~~use~~
need it to survive



Name:

Riley

Age:

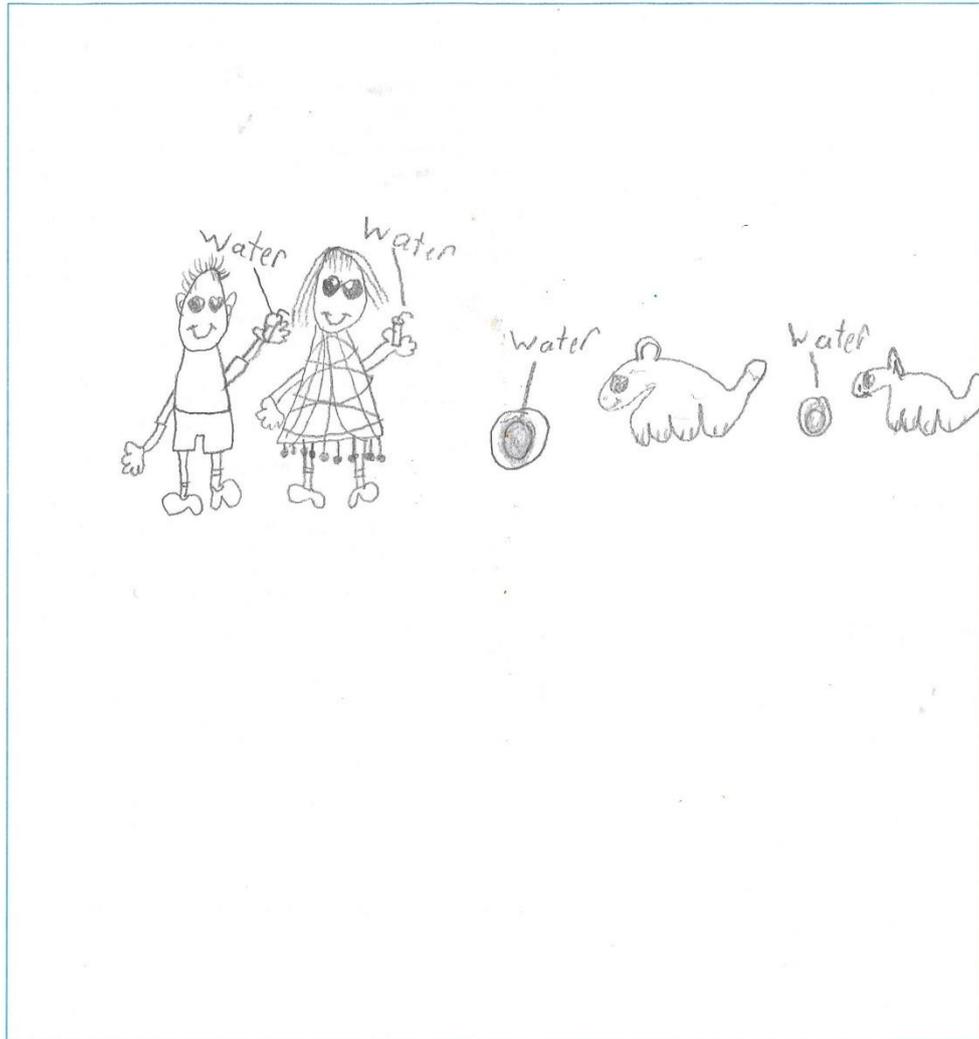
10



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is Important Because people and animals need to have water to survive.



Name: Rosabella

Age: 8-9

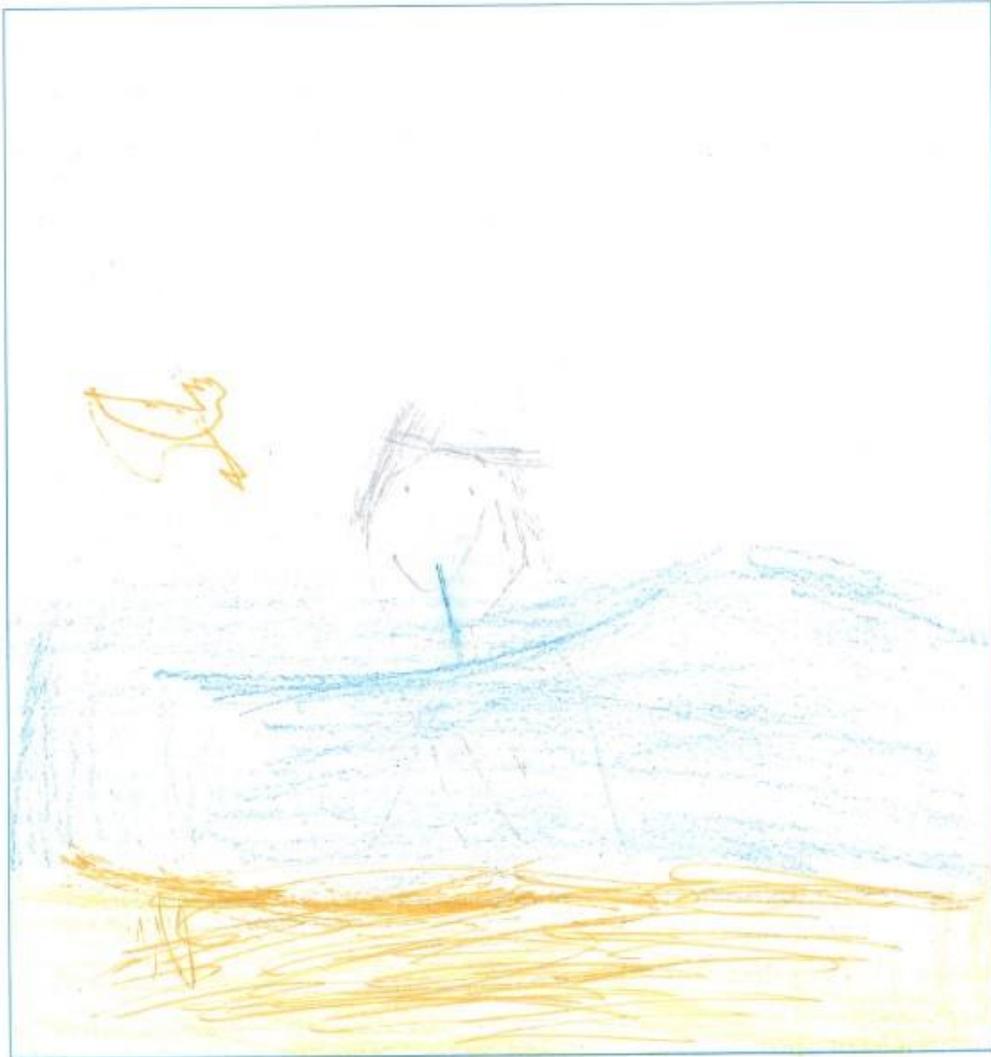


Ryan

WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

we need it to survive



Name: Ryan

Age: 7



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

It is healthy
would



Name: Theo

Age: 7



travis

WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

~~Water is important~~ because we need it to live.
we need it to be healthy



Name: Travis

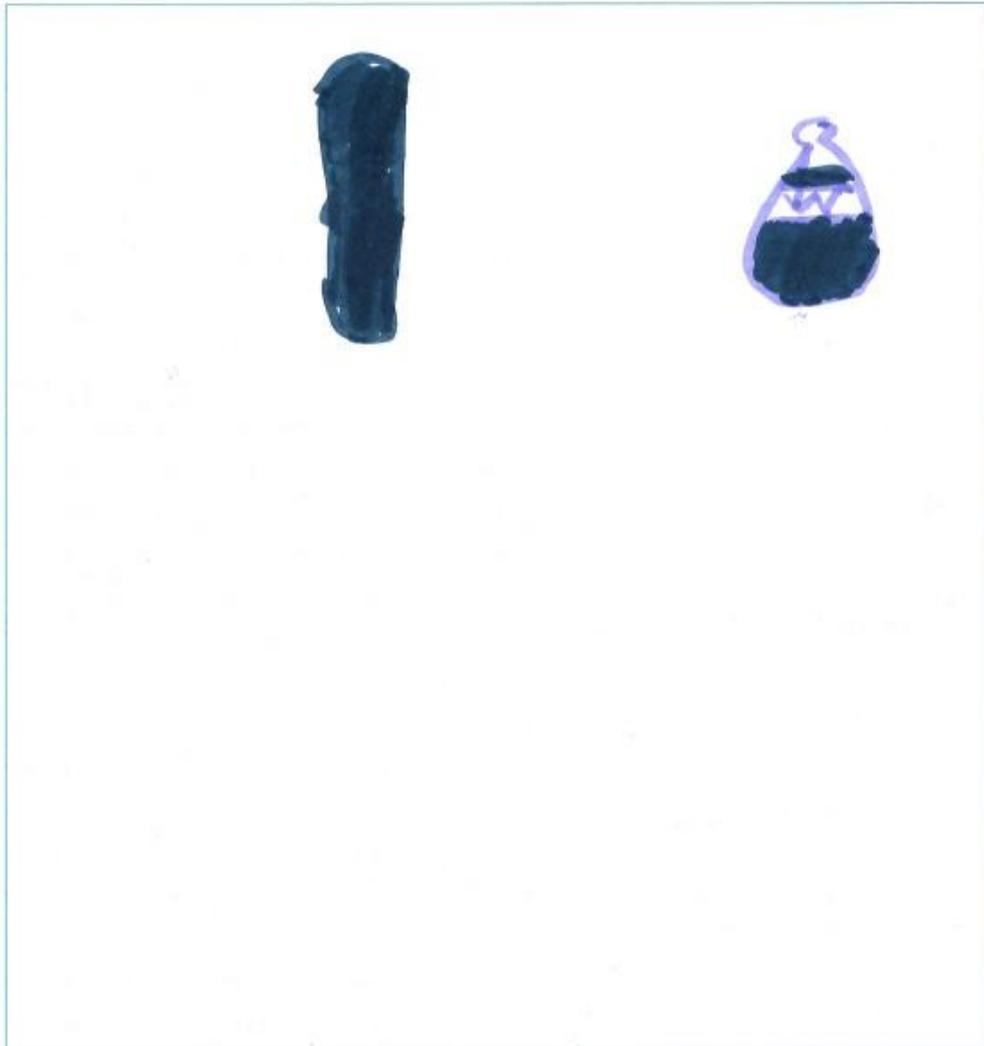
Age: 9



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

it helps you live



Name: Tyla

Age: 9



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

it keeps us healthy



Name:

Sam

Age:

7

Our
Water
Our
Future



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

if there was no water we
not be alive



Name: Tyler K

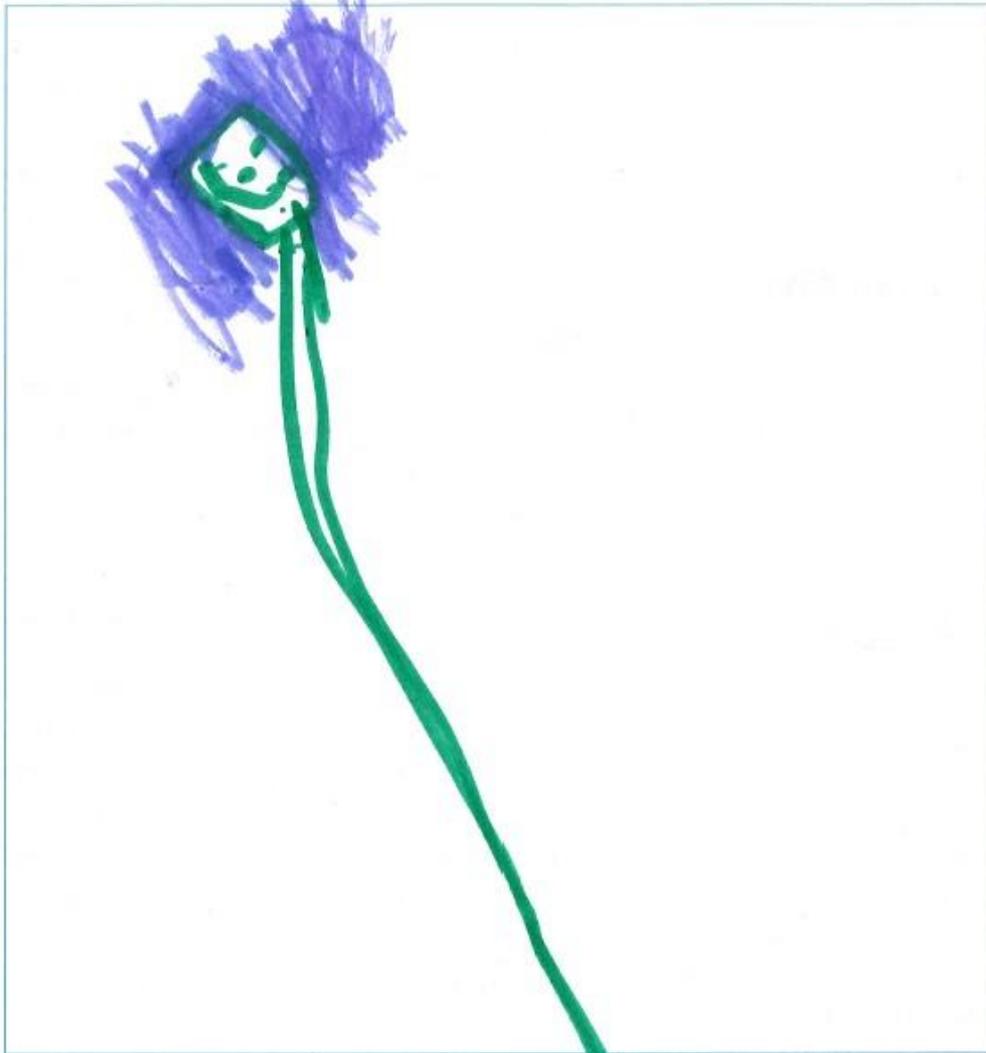
Age: 8



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

we need to have a bath and to have a drink.



Name:

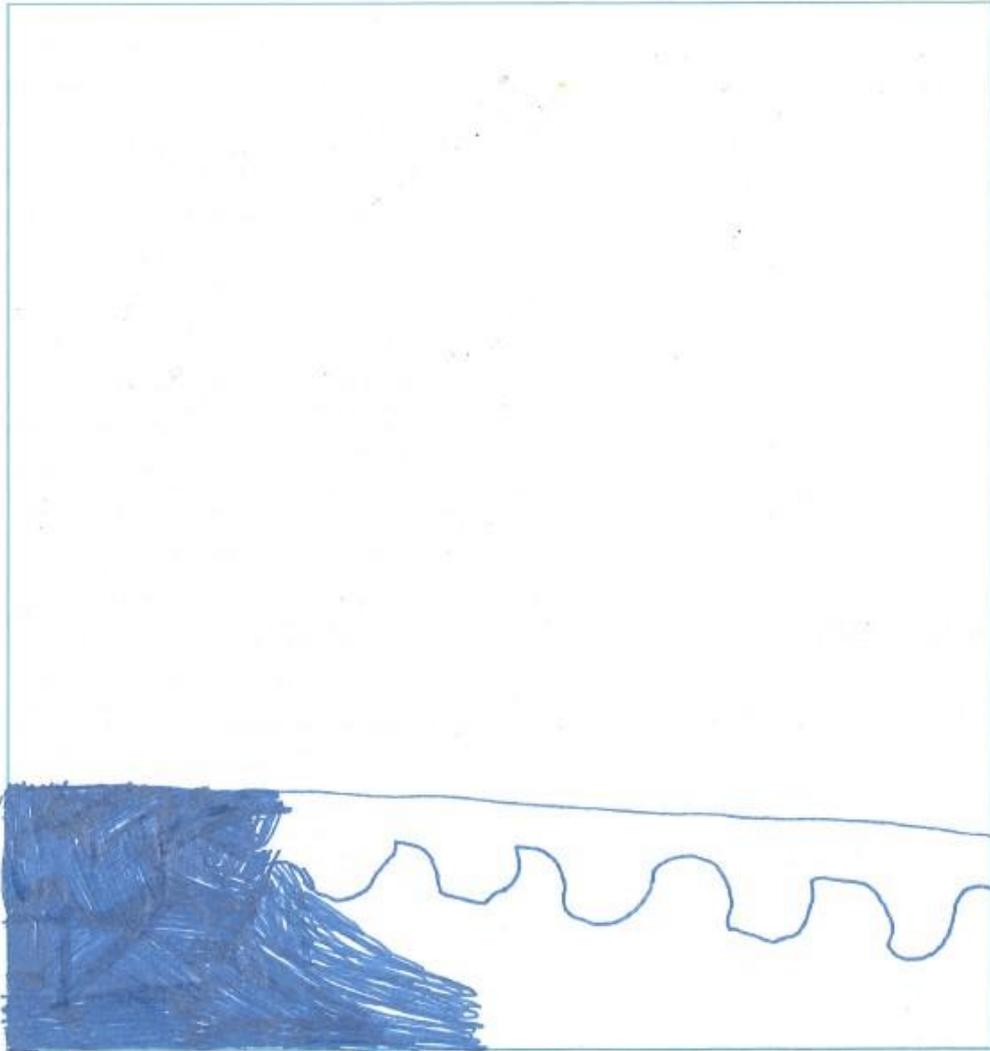
Age: 5



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

Water is important because we are
mostly made of water.



Name: Vince

Age: 7

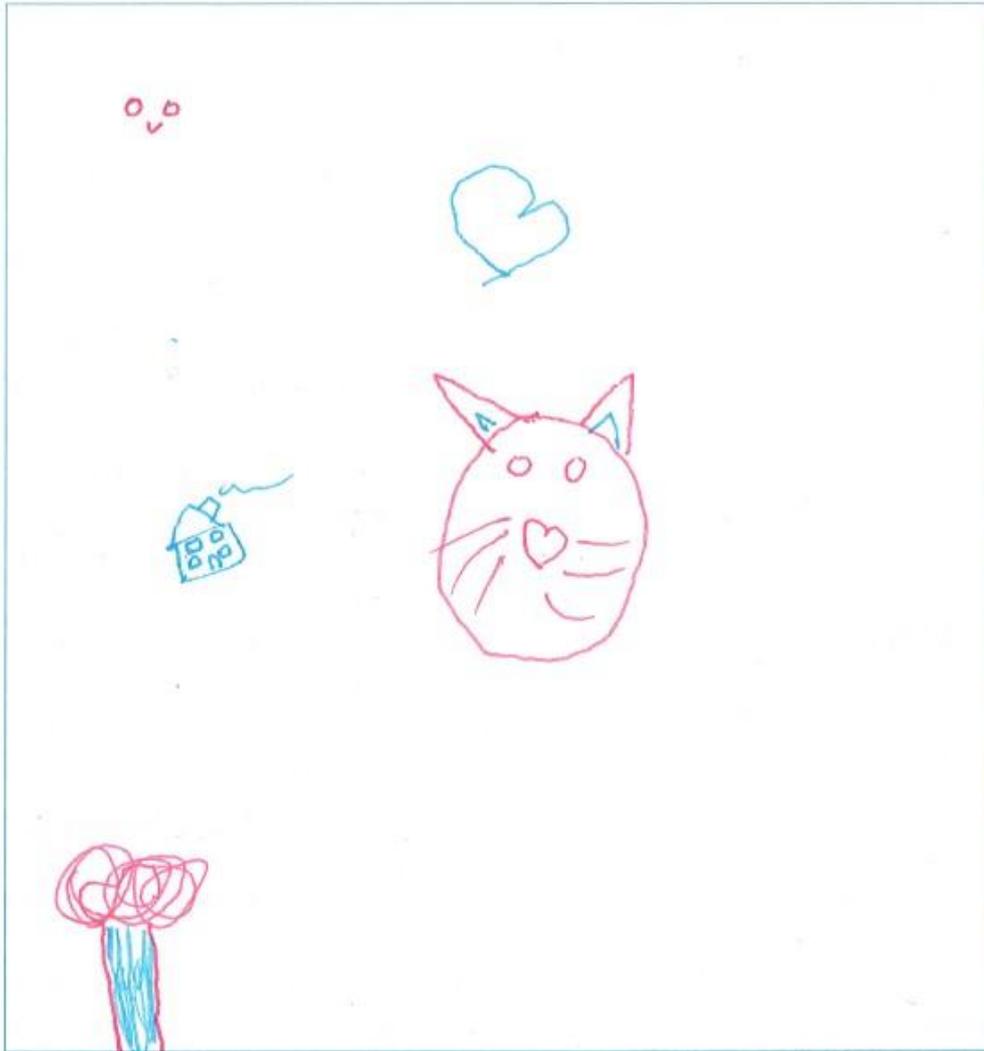


WATER IS IMPORTANT BECAUSE...

wyff

Finish the above sentence and then illustrate your answer in the box

you ~~can't~~ drink it



Name: wyff

Age: 5



WATER IS IMPORTANT BECAUSE...

Finish the above sentence and then illustrate your answer in the box

water is important because u can drink
it and helps nature.
if you dont have water you can
get really sick.



Name: zane

Age: 11

