



## Mihimihi

E whakatere mā te awa tipua, ki te Toi o te Rangi, Pae o ngā Atua, Takenga o te Puna Waiora.

Rukuhia te Puna Waiora. koinā te kaihoroi i ngā para o te Ao. Kauhorahia te Tai Moana-Tokonga o te Matapae Huarere Ārai o Para-whenua-mea. Whītikihia ko te tātua o Tawhirimātea hei pārai i ngā haukino o te wā. Whakamaua ō kamo ki ngā rārangi maunga, hei toka herenga whakaaro, mauri kopaki wairua, tāhuhu whakairinga i te mana atua. mana whenua. mana tangata.

Koinei te oha ka tohia nei e tatou ki te wai. Tūturu ōwhiti Whakamaua e Rongo kia eke! Eke panuku, eke tangaroa, Haramai te toki a haumi e, hui e, tāiki e!

### A tribute

Travel the path of the sacred river, to Heaven on High, the Mantle of the Gods to the Wellspring of Life itself.

Delve the depths of the Water Font, curer and cleanser for all the World's waste matter. Treat well the Oceans-Harbinger of Climate Fortress against Inclement Weather. Gird vourself with the waistband of Tāwhirimātea. to ward off the harsh winds of time. Fix your gaze upon the mountain chain, to anchor your best intentions, to embrace your inner being, and focus on the wisdom of gods, the wellbeing of land, and the continuance of mankind.

This is our purpose and commitment to water.
Bring these things to fruition Rongo, God of Goodness and Plenty, Bind us to be purposeful in this—indivisible, unrelenting and successful!

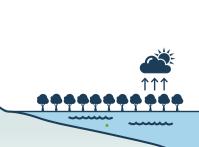
# our city, our water future together!

Haere Mai! Welcome! This document will help you understand the Metropolitan Servicing Strategy, the water and wastewater challenges we face, and how you can participate in the conversation.

Within this document you will find:

- Some of the water challenges and opportunities our city faces
- An overview of what we are trying to achieve and how your feedback will be used
- Three examples of different water management ideas for the future to get you thinking
- Some questions to help guide your feedback

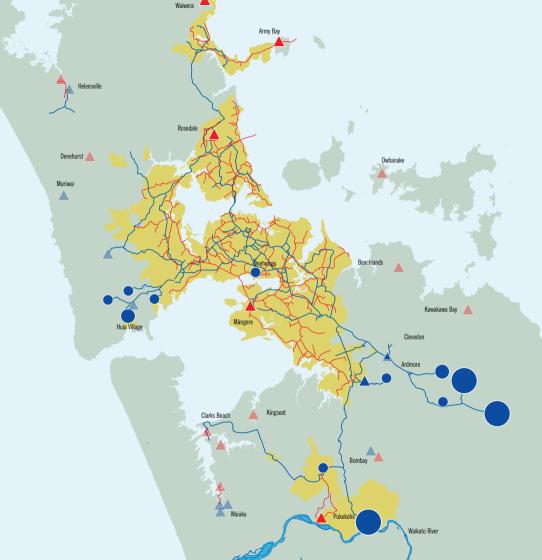
Let's shape the future together!



# Our city, Our water

Auckland metropolitan network now

- Metropolitan network area
- Water sources
- ▲ Water treatment plant
- Major watermain
- ▲ Wastewater treatment plant
- Main sewer



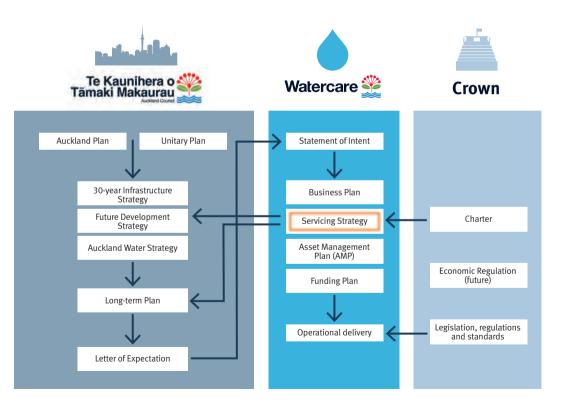
What is the Metropolitan **Servicing Strategy?** 

- 70+ year timeframe
- Puts all our challenges and possibilities for the future of water and wastewater management in one document
- Will open up better dialogue for conversations with the community
- Will enable us to better prepare for the impacts of climate change
- Will guide our decision-making



Our key priorities

# Where will this strategy fit in the planning framework?



We work closely with the Crown and Council to provide water services in line with long-term strategies and government direction.

# What will happen to your feedback?









Affordability and costeffectiveness

### What can I influence with my feedback?

There are areas within the strategy where you can have an impact:

- Investment in innovation and research
- Investment into local environment enhancement
- Doing more or less to reduce the effects of climate change
- Adapting more quickly to the impacts of climate change

#### The level of influence

There are things that are outside of the community's influence:

- The delivery of safe drinking water
- Adherence to our statutory commitments
- The support of growth in line with Council plans
- The affordability of our services

#### **Our commitment:**

If we hear strong themes consistently held across the community, it will have an impact on our decision-making by being incorporated into our metropolitan servicing strategy document.

We'll let you know what we heard and what we are doing to act on feedback in our engagement report. In this way, your feedback and its impact on decision-making will be more transparent.

# Quick facts about Auckland's water and wastewater today:

# our city, our water 👍

# Water in... wastewater out

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### Water:

- 80 per cent of Auckland's water comes from the south, from dams in the Hūnua Ranges and the Waikato River. Only 20 per cent comes from dams in the Waitākere Ranges. All our water sources depend on rain.
- Currently, around a third of our water comes from the Waikato River and we have committed to Waikato Tainui to not increase the amount of water we take from the river, beyond consented limits.
- Auckland doesn't have a northern source of water to supply the metropolitan network. We rely on water from the south and west to supply the growing population in the north of Auckland.

### Wastewater:

- Approximately 86 per cent of our wastewater is treated and discharged into the Manukau Harbour.
- Wastewater overflows occur in our network, caused by many different reasons (some of these are to do with lack of capacity in the network and some are to do with private plumbing issues or people putting the wrong things down the sink or toilet).

### Biosolids:

- Biosolids are the biological mass left over after wastewater treatment.
   They are the good bugs that treat our wastewater by eating up all the carbon, nitrogen and phosphorous.
- We are reaching capacity in the way we dispose of our biosolids. We need to decide what to do with the 300 tonnes (24 truck and trailers) per day of biosolids that are produced in our Mangere Wastewater Treatment Plant.









1 Aucklander 1 Household



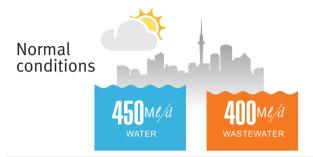




 $M\ell/d$  = million litres per day

# Our water use

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When it is rainy and cold we use **less** water

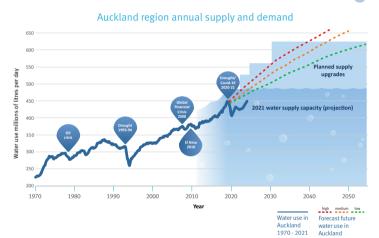


But we produce more wastewater due to stormwater entering the pipes

When it is hot and dry we use **more** water



A lot of this extra water is used outdoors and does not increase wastewater flows



Our population is growing. We need to plan for new water sources and what we do with more wastewater and biosolids in the years to come.



# Why we need to work together Why you? Why now?





The future looks brighter when we work together

# our city, our water

# Our city, our water – who we are **now**





Auckland needs to be able to accommodate 700,000 more residents (with a total population of 2.3m) by 2050. Research suggests that Auckland's population could double by 2073.

Our climate is changing as well - so even if the population doesn't increase, it will still be increasingly difficult to serve Auckland without disruption as we look ahead (droughts, floods, storms, fires, sea-level rise).

Ensuring secure and sustainable drinking water supply requires careful planning as total water demand is projected to increase as Auckland's population arows.

Auckland needs long-term (generational) change to water infrastructure systems through new approaches that align with the council's aspirations for climate positive and resilient infrastructure.

# Climate change impacts we are already seeing in Auckland

**DROUGHTS** 











**FLOODS** 













- These are the predicted impacts of climate change
- We are already seeing these in Auckland
- That's why we are thinking about how to prepare for the future and why we are trying to address these challenges now
- We prefer to plan than to react and want to increase our level of preparedness

our city, our water





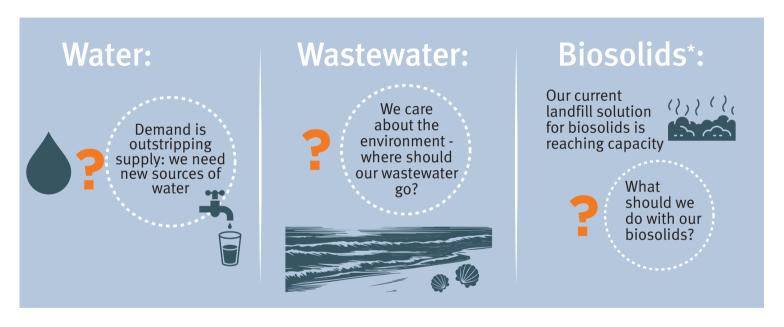
Where should we direct our investment?

That's why you're here!



# We are reaching capacity in the way we deliver our current services







Decisions we make now will have an impact beyond 2100!

What kind of city should we plan for?

The future holds plenty of challenges and opportunities!

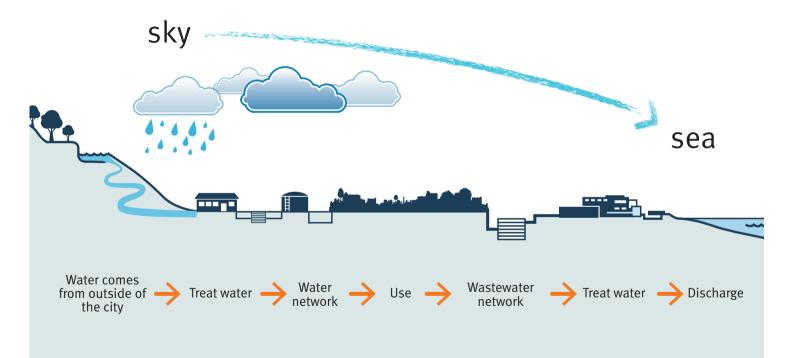
In the next section, we've set out three possible futures for the way water and wastewater are managed in Auckland. They are different approaches to how we might meet the future challenges described earlier.

There may be parts of each framework that you like, and that you don't like.

As you read through the next pages, think about what you value and what you want to avoid, and what else you want to know. You can provide your feedback in the survey at the end.



# **POSSIBLE FUTURE 1:** BUSINESS AS USUAL



In this future scenario, we keep doing what we currently do: take water from dams and rivers and use it, then treat it and discharge it into our harbours and waterways. We comply with all legal standards. When we need more water we take it from the environment and/or tell people to use less.

# BUSINESS AS USUAL

# **Pros & cons**

- Supply: limited by rain
- Cost: lower in short-term, likely higher in long-term
- Innovation: minor, we stick with technology that is familiar and trusted
- Environment: little circularity, take a lot from the environment, discharge a lot (treated) back into the environment
- Centralised

# Climate change considerations

#### **DROUGHTS**



- restrictions
- campaigns

#### **FLOODS**



reactive fixes

#### **STORMS**



reactive fixes

#### SEA LEVEL RISE



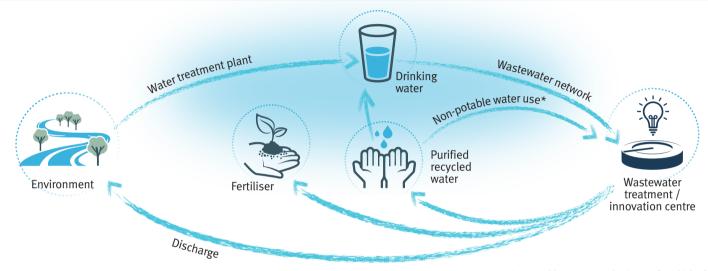
fortify or move



what don't you like?

66 what else?

# **POSSIBLE FUTURE 2:** RECYCLING & INNOVATION



\*Non-potable water: Water that is not safe to drink, often used for irrigation, cleaning, or industrial purposes.



In this future scenario, wastewater treatment plants use technology to turn wastewater into high quality drinking water, fertiliser and other potentially useful products.

# RECYCLING AND INNOVATION

# Pros & cons

- Supply: continuous
- Cost: high in the short-term but get benefits from resources created in the medium and long-term
- Innovation: maximise exposure to technological advances, but some risk that not all innovations will work
- Environment: highly circular, better outcomes locally from not taking or discharging as much water, but it uses energy to make resources
- Centralised system



### Climate change considerations



**DROUGHTS** 

**FLOODS** 

**STORMS** 

SEA LEVEL RISE









purified recycled water

innovate and react innovate and react

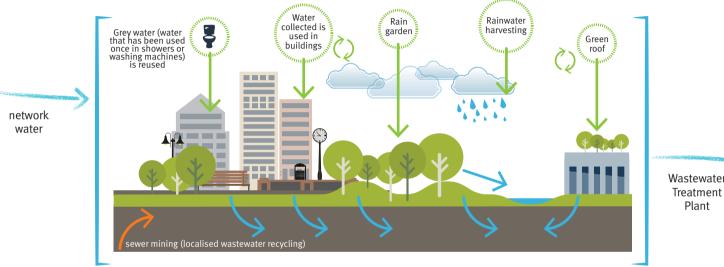
fortify or move

what do you like?

what don't you like?



# **POSSIBLE FUTURE 3: WATER SENSITIVE CITY**



Water comes from Use  $\rightarrow$  Reuse  $\rightarrow$  Flow through catchment Treat, recover Excess to dams, rivers and and recycle environment roofs inside the city

Water sensitive design seeks to protect and enhance natural freshwater systems, sustainably manage water resources, and mimic natural processes to achieve enhanced outcomes for ecosystems and our communities.

# WATER SENSITIVE CITY

# **Pros & cons**

- **Supply:** more water efficiency, rainwater harvesting and greywater recycling reduce the need for water from dams and rivers, catchment level wastewater recycling required to reduce exposure to drought
- Cost: high, with benefits in long-term due to reduced impact of floods and storms
- Environment: beneficial to local and regional environment, greener, cooler city
- Decentralised/ catchment based

### Climate change considerations

#### **DROUGHTS**



- More local storage and reuse, still some reliance on rain

#### **FLOODS**



 reduced impact - daylighting of streams

#### **STORMS**



- reduced impact

#### **SEA LEVEL** RISE



- local design issue

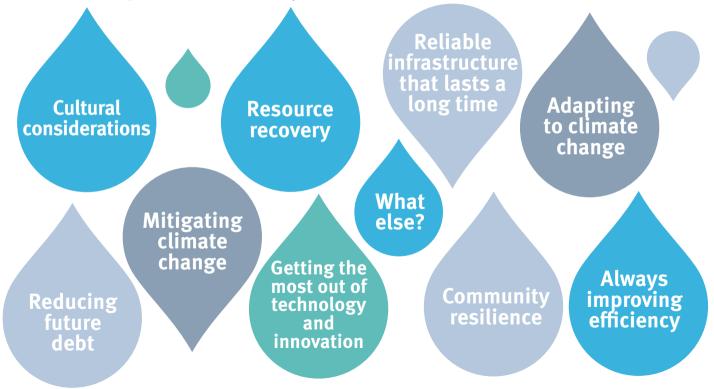
what do you like? what don't vou like?

else?

Now you have considered the possible futures in the previous pages...

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what really matters to you?



# What **next** Your voice is **important!**

