



Central  
Coast  
Council

Water  
and Sewer



**Water and Sewer  
Performance Report**  
**2022-2023**

*Mangrove Creek Dam*

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Mardi Dam

# Director's message

Welcome to our first 'customer-defined' Water and Sewer Performance Report.

Following extensive engagement with you, our customers, we have listened to your feedback about what you value and where you want us to direct our future focus. This report updates the performance measures from our last report published in October 2022 and is based on your shared values:

- Good quality water
- Quality treatment
- Reliable service
- Affordable
- Effective planning
- Environmental focus
- Transparency and education

In another 'first', this report covers the first full financial year of our current Determination period of 2022-2026 by the Independent Pricing and Regulatory Tribunal (IPART).

We achieved some pleasing results in the 2022-23 financial year, particularly around our sewer network where a favourable trend indicates a reduced number of sewer breaks and chokes across the Central Coast.

Our service delivery has been influenced by environmental, social and economic impacts, including inflationary pressures, a highly competitive employment market, and escalating energy costs.

We remain committed to providing you with a water and sewer service that meets your expectations. Our Water Security Plan will help us to deliver a resilient and sustainable water future as we move through forthcoming challenges.

We acknowledge the contribution of all residential and business customers who helped inform this report, as well as other key strategic documents. We encourage you to continue to have your say about water and sewer services and keep in touch to receive our updates on how we are delivering our water and sewer service commitments.

Finally, to the staff of Central Coast Council Water and Sewer, thank you for your dedication and service to our community.

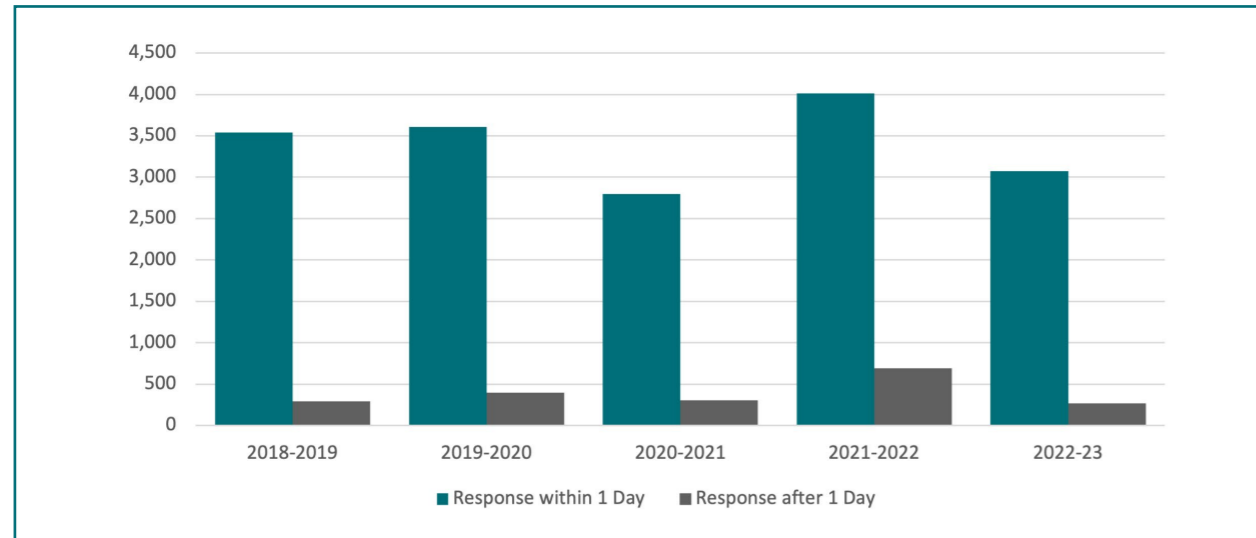
**Jamie Loader**  
Director  
Central Coast Council  
Water and Sewer



Mangrove Creek Dam

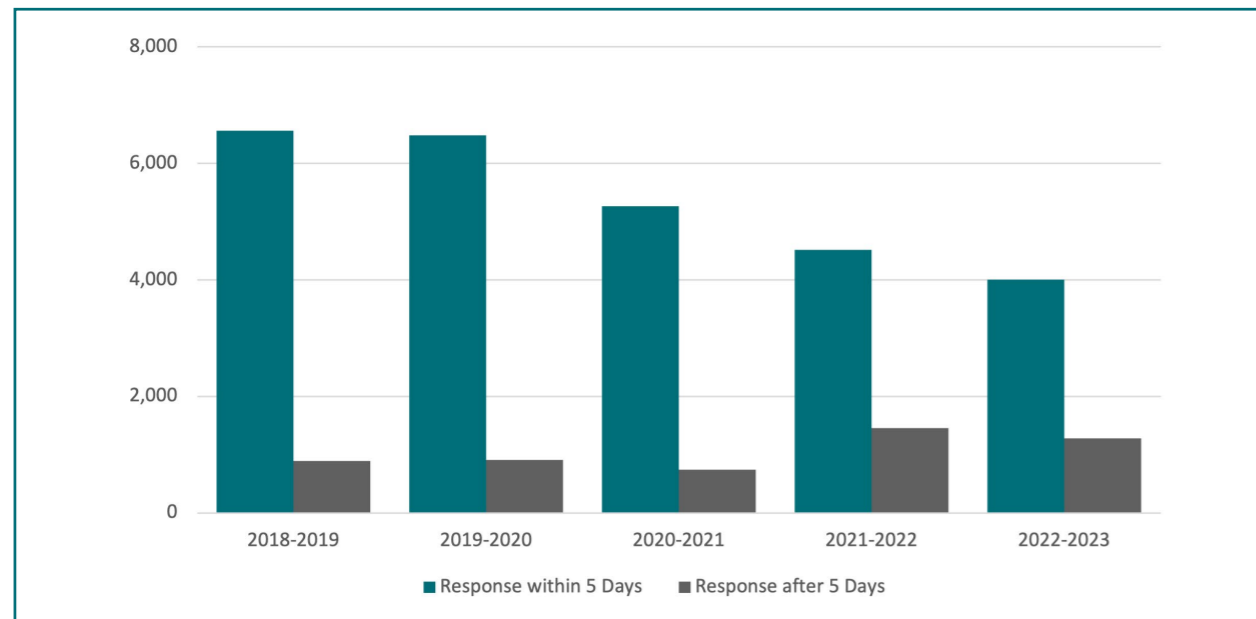
# Customer

## Responding to urgent issues reported by our customers



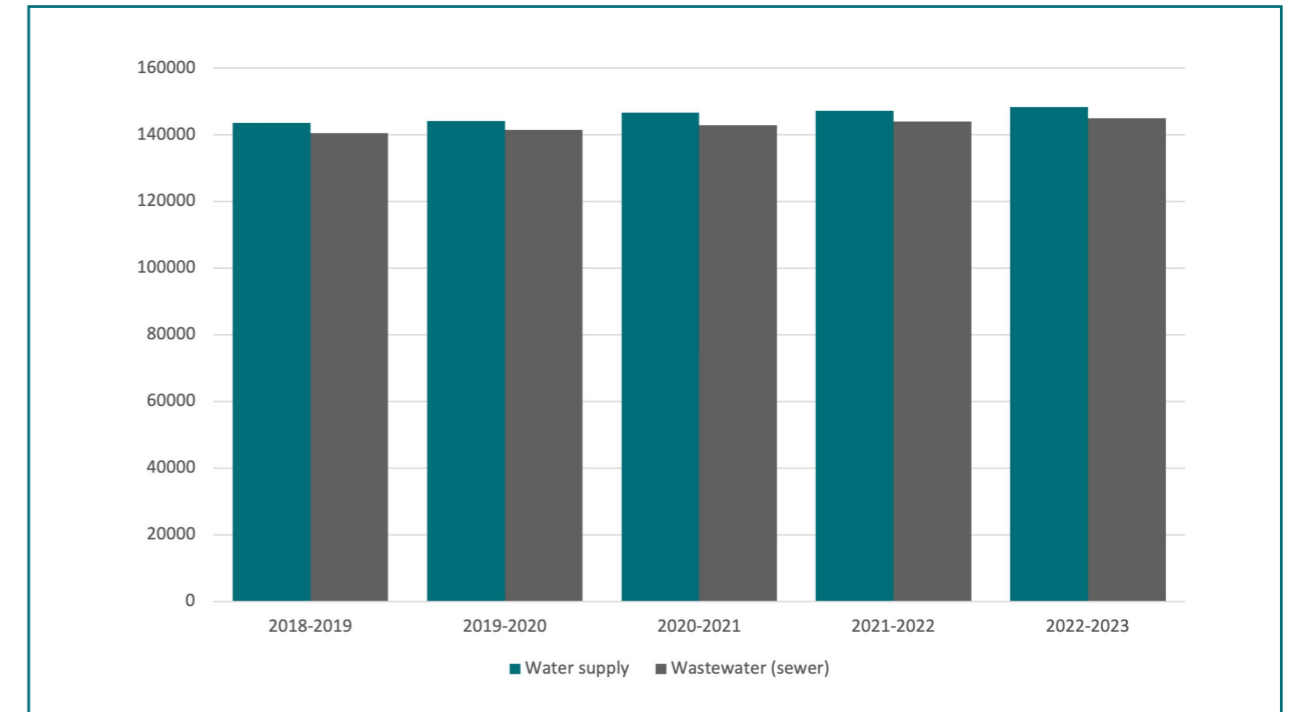
Urgent issues include sewer chokes, water mains breaks or potential environmental impact.

## Responding to non-urgent issues reported by our customers



Non-urgent issues include water pressure or slow leaks.

## Number of properties connected to our water and sewer network



This graph shows the number of properties receiving water and wastewater (sewer) services.

## How we've kept our community updated over the last 12 months

### Central Coast Council Social Media

-  **59,756** Facebook followers
-  **13,047** Instagram followers
-  **6,223** Twitter followers
-  **11,295** LinkedIn followers

#### Social media post topics:

- Water outages and restoration
- Water and sewer main breaks
- Water quality information
- Flood alerts around our catchments
- Dam storage levels
- Environmental sewer discharge and overflow alerts
- World Water Week communications and promotion
- Discoloured and cloudy water alerts
- Water and Sewer Performance Report publication
- Major upgrades - Gosford CBD's Water and Sewer network
- Water pressure alerts
- How to report a water or sewer issue to Central Coast Council
- Planned works that effect water access and quality
- Maintenance works to ensure the flow of storm water runoff into urban channels
- Construction of the Mangrove Creek Dam Visitor Centre
- Bi-annual progress report on Council's Water and Sewer Delivery Plan
- Housing Acceleration Fund Infrastructure works at Warnervale Town Centre
- Community consultation forums at Gosford and Wyong
- Water main renewal Hardys Bay
- Improving Your Water and Sewer Services customer survey

## How we've kept our community updated over the last 12 months



### Radio broadcasts

- 75 Broadcasts, 6 different channels



### Newsletters/Direct mail

- 6 direct mailouts (printed form)
- 14 issues of electronic newsletters sent
- "Improving Your Water and Sewer Services" email to over **60,000 recipients**



### Engagement forums

- 4 face to face deliberative forums in Wyong and Gosford with 84 participants
- 23 in depth interviews with Aboriginal and Torres Strait Islander People, Culturally and Linguistically Diverse residents, large business customers and young people aged between 16-18
- 2 "deep dive" focus groups on development of our first Water and Sewer Customer Charter



### Surveys

- 1,232 completions



### Your Voice Our Coast (YVOC) website - our engagement platform

- 3,378 YVOC page visits



### Reports presented at Council meetings

**Aug-22:** Central Coast Council Water and Sewer Asset Monitoring – Satellite AI – Rezatec and Detection Services Pty Ltd

**Oct-22:** Water and Sewer Delivery Plan 2022-2026

**Jan-23:** Mardi Water Treatment Plant Upgrade

**Mar-23:** Water and Sewer Delivery Plan 2022-2026 – Progress Report

**Mar-23:** Central Coast Council Liquid Trade Waste Management Policy (Draft for public exhibition)

**Jun-23:** Central Coast Council Liquid Trade Waste Management Policy (Final)



### Media releases

**Nov-22:** Council commits to improved water and sewer service delivery

**Feb-23:** Improving your water and sewer services

**Mar-23:** Treatment plant upgrade to secure safe drinking water

**Mar-23:** Water and Sewer Delivery Plan Progress Report

**May-23:** Continuing community consultation to improve your water and sewer services

**May-23:** Water and Sewer upgrades continue across the Central Coast

**Jun-23:** Have your say about your water and sewer services



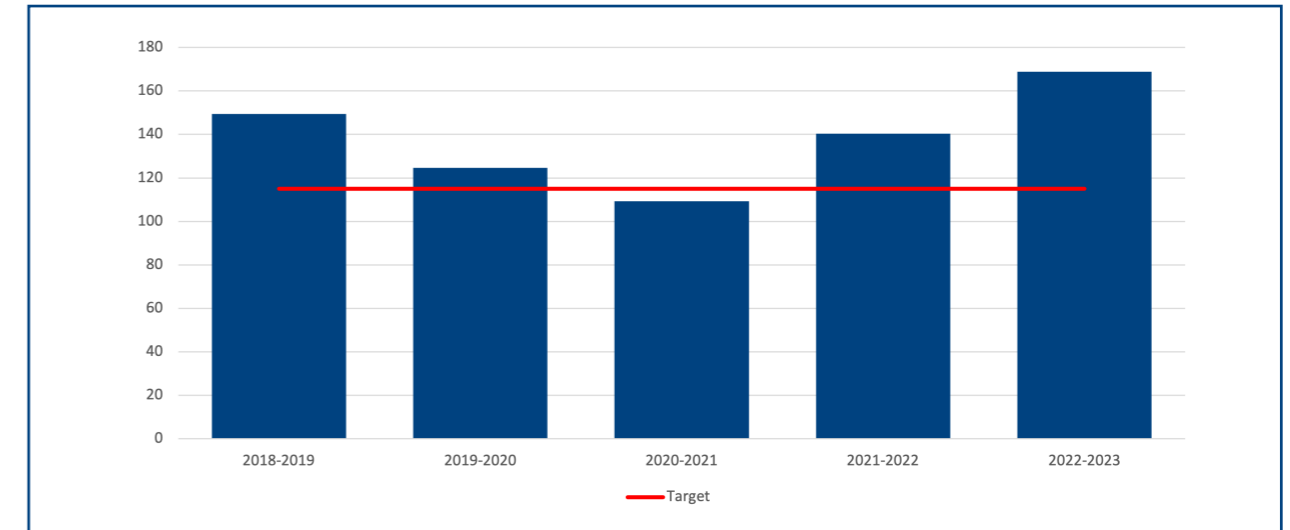
### Public exhibitions

- Liquid Trade Waste Management Policy - received **167** page views and **47** document downloads

- "Improving Your Water and Sewer Services" engagement - received **996** page views

# Service reliability

## Number of unplanned water supply outages, per 1,000 properties



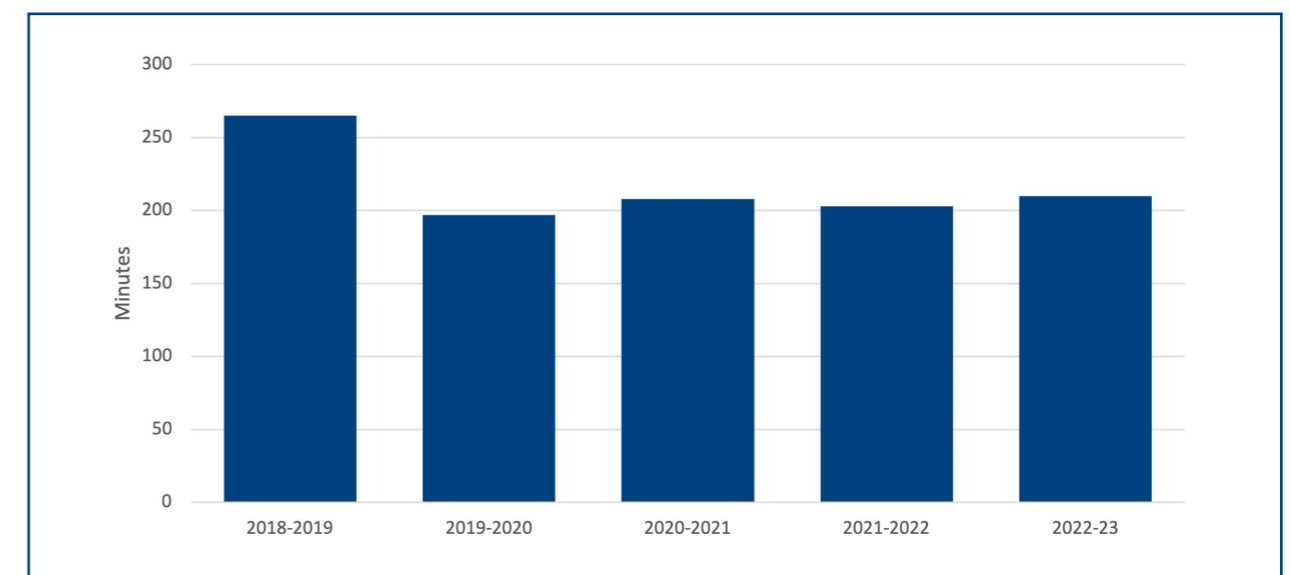
Water outages occur when we are unable to supply water due to a broken main or when repairs are being completed.

Unplanned outages were higher, resulting from increased water main breaks and failures of customer connections and maintenance structures as assets deteriorate. Outages peaked in June 2023 in response to an increase in water main breaks as described under "Water main breaks, per 100km of main".

Investment in water main renewals is increasing in 2023-24 to target poor performing assets. Additional renewal programs are being developed and will commence in 2023-24 targeting customer connection points and maintenance structures to further reduce the frequency and severity of unplanned outages.

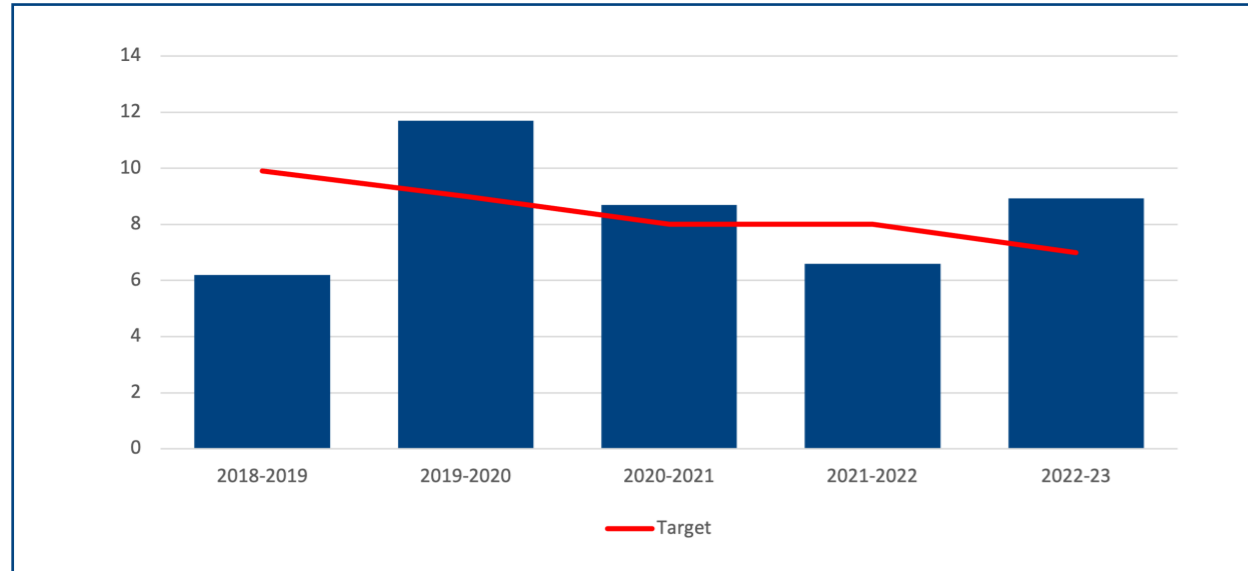
Council staff are also reviewing how we communicate upcoming works and maintenance to better inform customers of required service interruptions while improvements are being made.

## Average duration of unplanned interruptions to water supply



This graph represents the time it takes Council to restore water supply to our customers.

## Water quality complaints per 1,000 properties



Targets have been aligned to those set by IPART, noting that future targets will be established in consultation with the community.

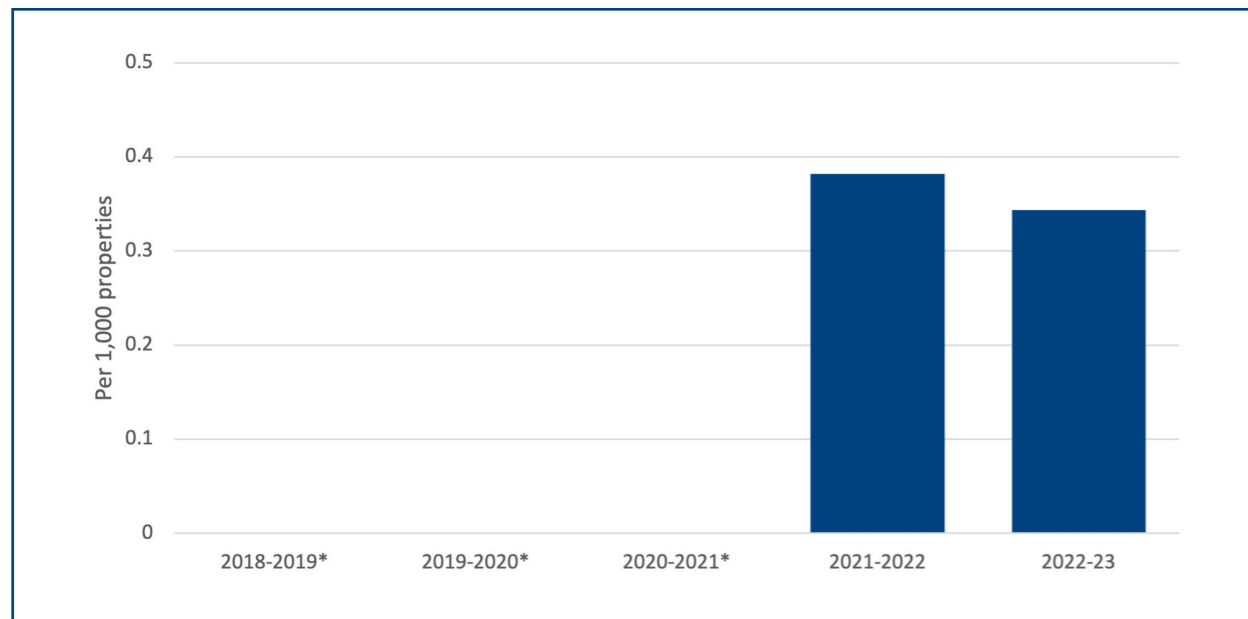
The total number of water quality complaints was heavily influenced by weather and water quality conditions during January and February 2023 regarding discoloured water complaints. These complaints typically peak in summer as demand increases, which results in faster moving water in the distribution network that can stir up accumulated particles. A significant reduction in water network flushing and cleaning through 2019-20 and 2020-21 has likely contributed to the peak in discoloured water issues experienced last summer.

Water quality improvements are underway across both the treatment assets that produce clean and safe drinking water as well as the network assets that convey water to our customers.

A contract has been awarded for a major upgrade to Mardi Water Treatment Plant that will improve the filtered water turbidity and chlorine stability. These works are due to be commissioned in late 2025.

Improvements underway within the network include recommencement and optimisation of our water main flushing and cleaning programs, and increased renewals of water mains that can impact water quality if they break and change flow patterns in the network. An ongoing program of removing 'dead ends' within the water network by building additional pipelines will minimise the potential for discoloured water accumulation.

## Number of water pressure complaints per 1,000 properties



\*Data regarding water pressure complaints was not available prior to 2021-2022.

## Water sampling results

Council is committed to providing high quality drinking water and conducts regular testing to ensure we comply with many important regulations around drinking water.

NPR Indicator Name	Unit	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023
Water sampling/ results - microbiolog	No. tests performed	3,096	3,356	3,333	3,206	3,292
Water sampling/ results - microbiology	No. results not compliant with Australian Drinking Water Guidelines	1	1	0	4	0
Water sampling/ results - chemistry	No. tests performed	2,424	2,647	2,607	3,128	3,226
Water sampling/ results - chemistry	No. results not compliant with Australian Drinking Water Guidelines	1	0	3	0	3

### 2022-23



Nickel: Nickel concentration greater than the guideline value of 0.02 mg/L was obtained from water samples collected from different sampling locations on 10 January and 9 March 2023.

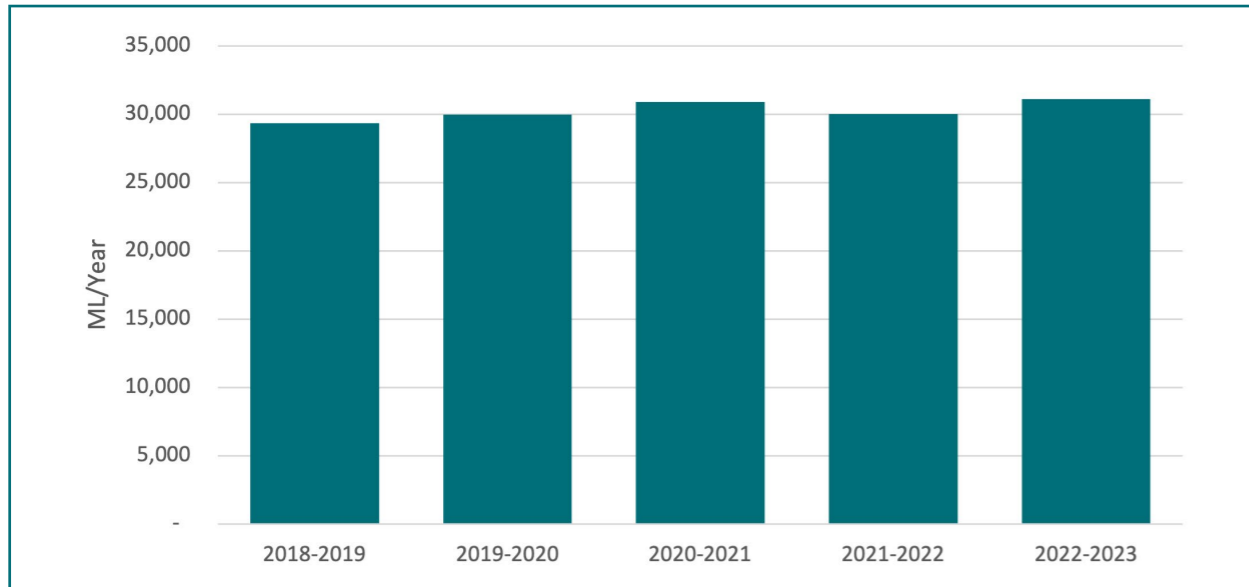


Lead: Lead concentration greater than the guideline value of 0.01 mg/L was obtained from a water sample collected on 11 April 2023.

In each instance an investigation was undertaken to verify that similar concentrations of these metals were not present in the water distribution network. For all instances, the cause was found to be due to the metal coming from the taps where the samples were collected from. The taps were replaced to eliminate the cause.

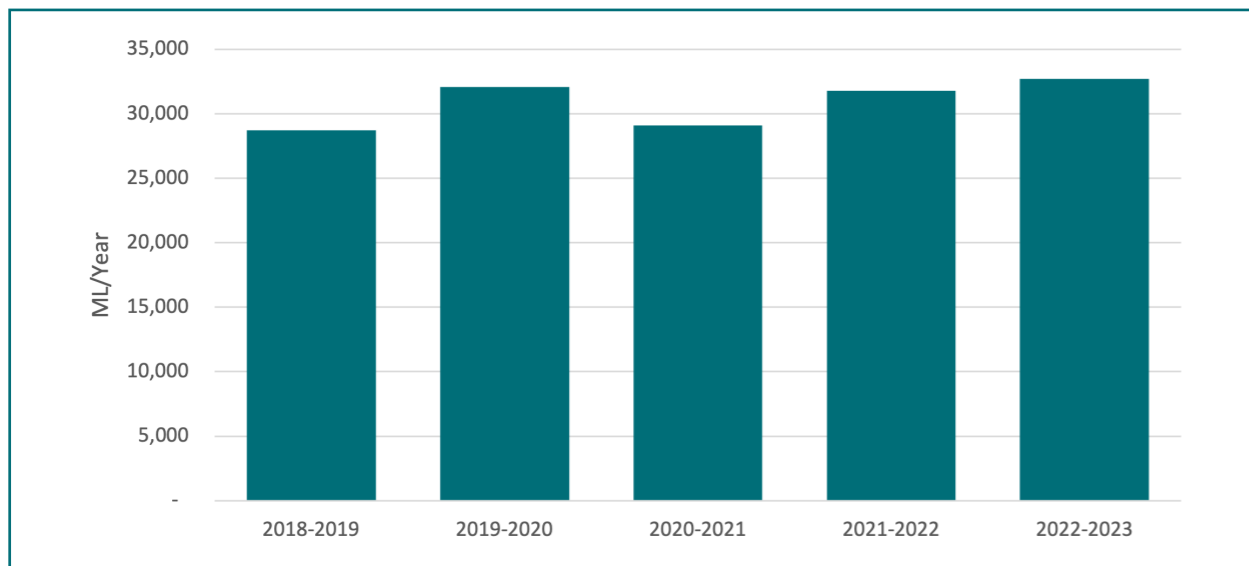
# Water conservation

## Water production



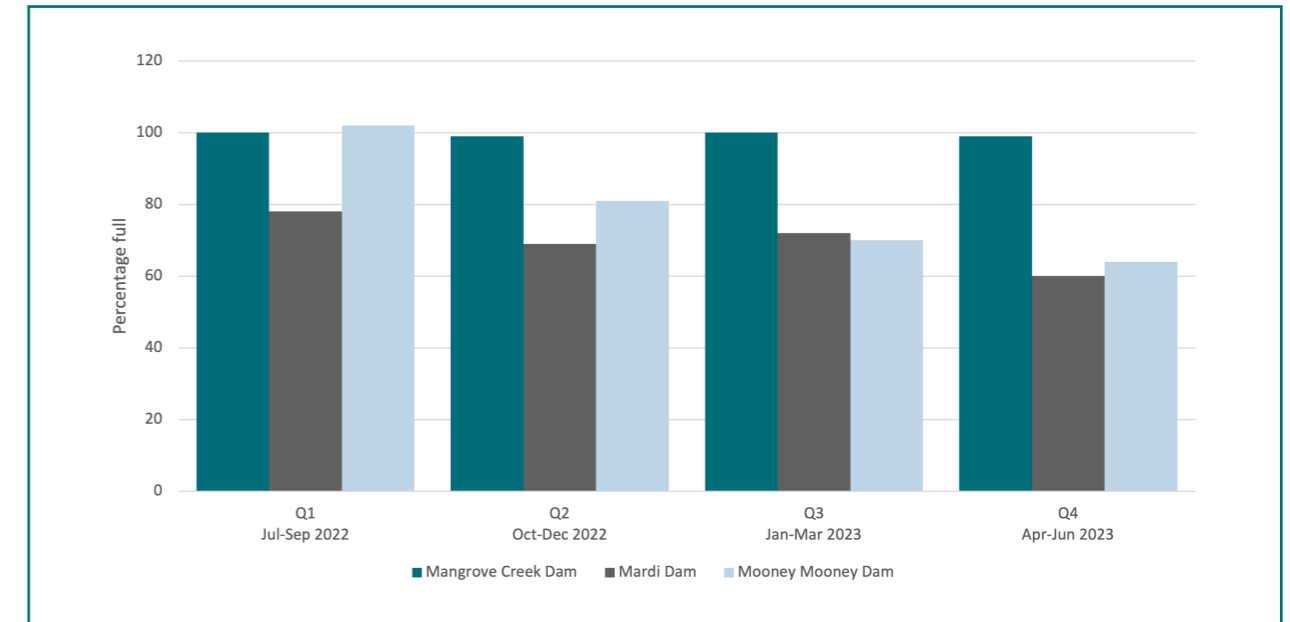
Water production is the water supply across the Central Coast LGA to meet our customers' demand. This is adjusted for any transfers to and from Hunter Water. Any transfers from Sydney Water to Central Coast residents near Mooney Mooney are not included.

## Water yield



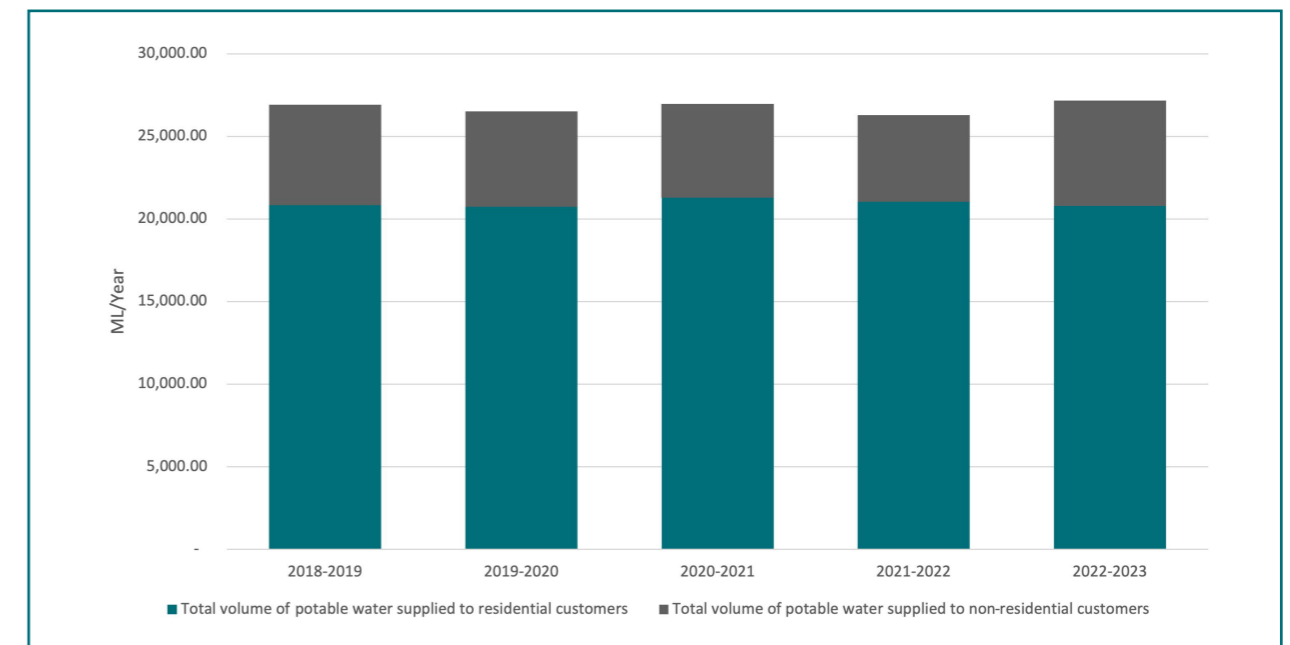
Water taken from Mangrove Creek Dam, Mardi Dam, Mooney Dam and Mangrove Creek Weir (includes any release from Mangrove Creek Dam to Mangrove Creek weir) minus transferred to Mooney Dam. It includes any water used for back wash of filters. It also includes water to meet Hunter Water transfers under the Central Coast-Hunter Water agreement.

## Storage/Dam levels



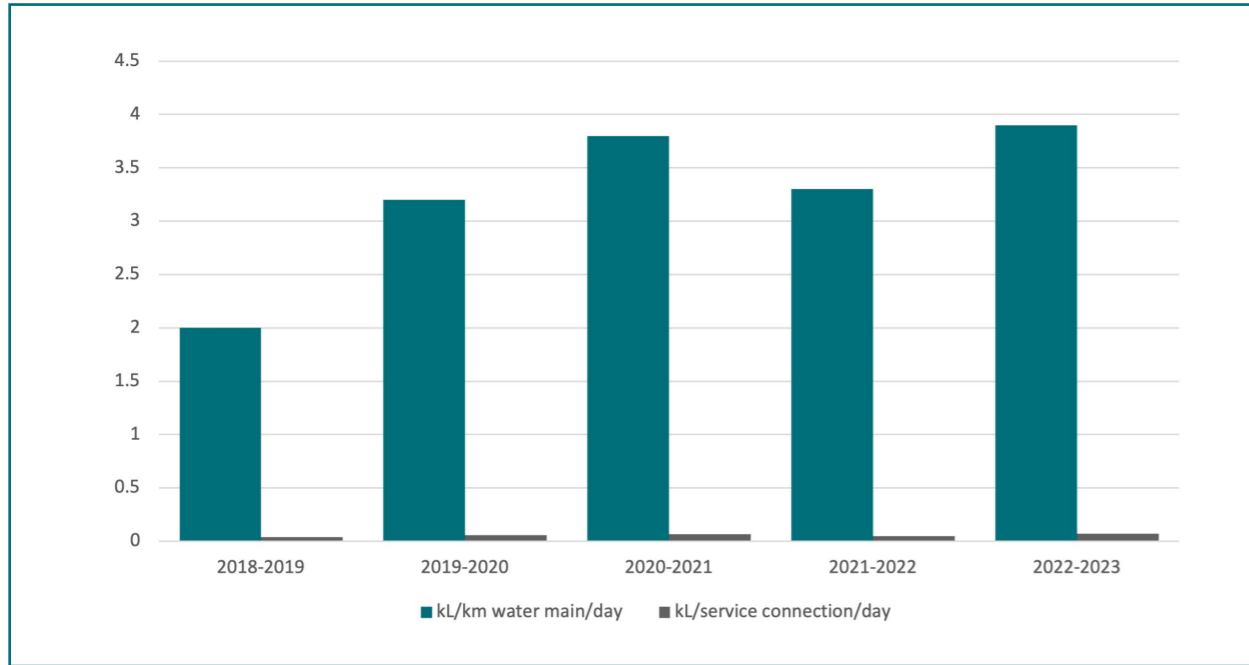
Percentage shown is the 'average' for the quarter, based on daily readings.

## Annual water consumption



Water delivered to our residential and non-residential customers is measured using customers' water meter readings.

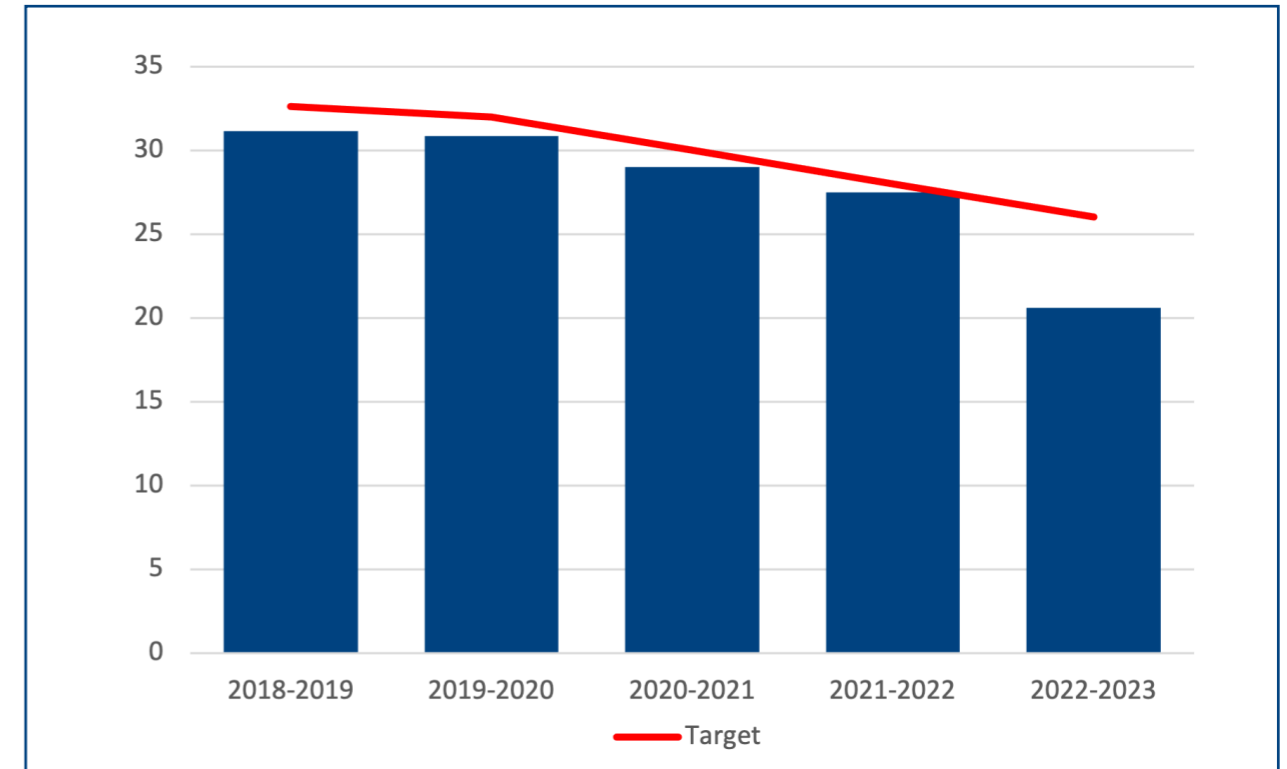
## Real water losses (leakage)



This graph shows the amount of water lost annually through minor water leaks in the system. Water loss estimates for 2022-23 have been affected by higher operational usage of water due to the increased number of water quality complaints. System wide flushing was required during March 2023 to manage water quality complaints.

# Environment and public health

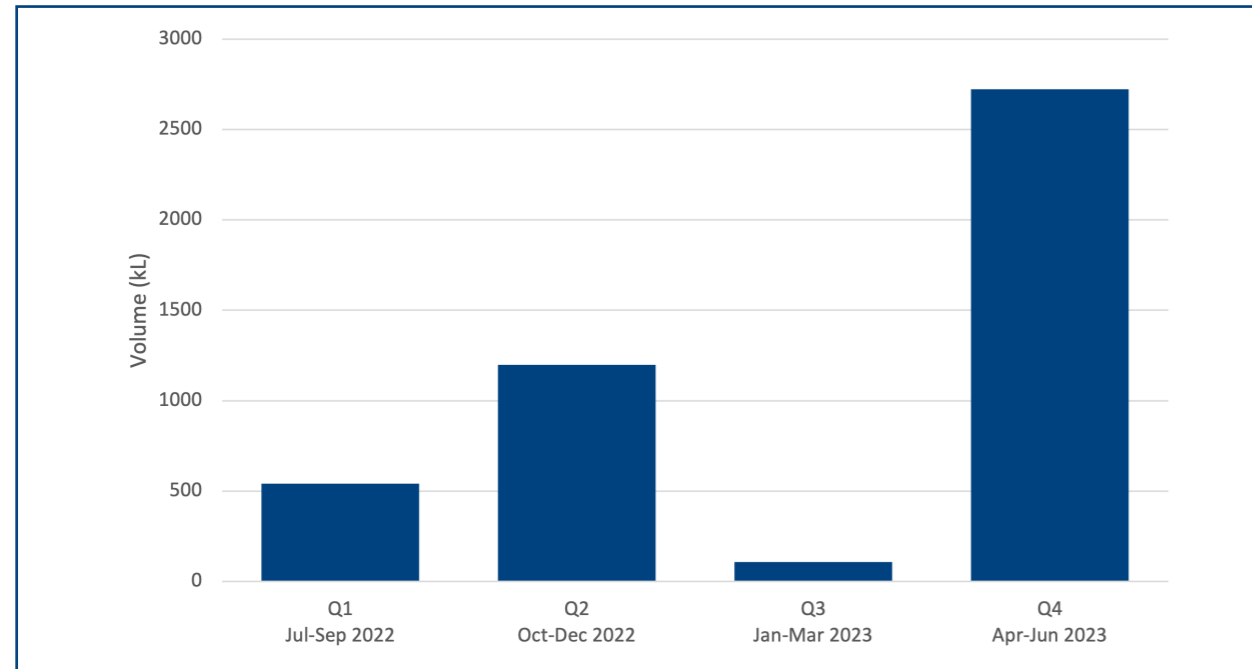
## Wastewater overflows per 100km of main



Targets have been aligned to those set by IPART, noting that future targets are to be established in consultation with the community.

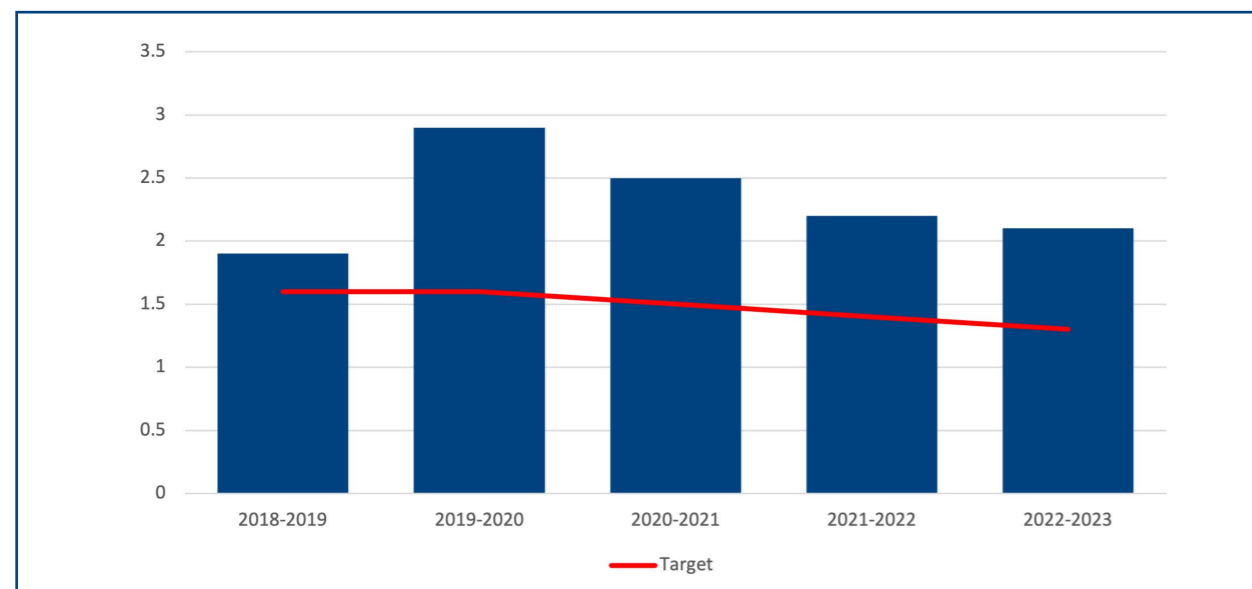


## Severity/volume of sewage overflows



The peak in April-June 2023 was due to a higher number of reported discharges and higher discharge volumes. A West Gosford rising main break in April resulted in a discharge volume of 1834 kL. This was the highest volume discharge in 2022-23. Discharge volumes in May and June 2023 were substantially lower than in April.

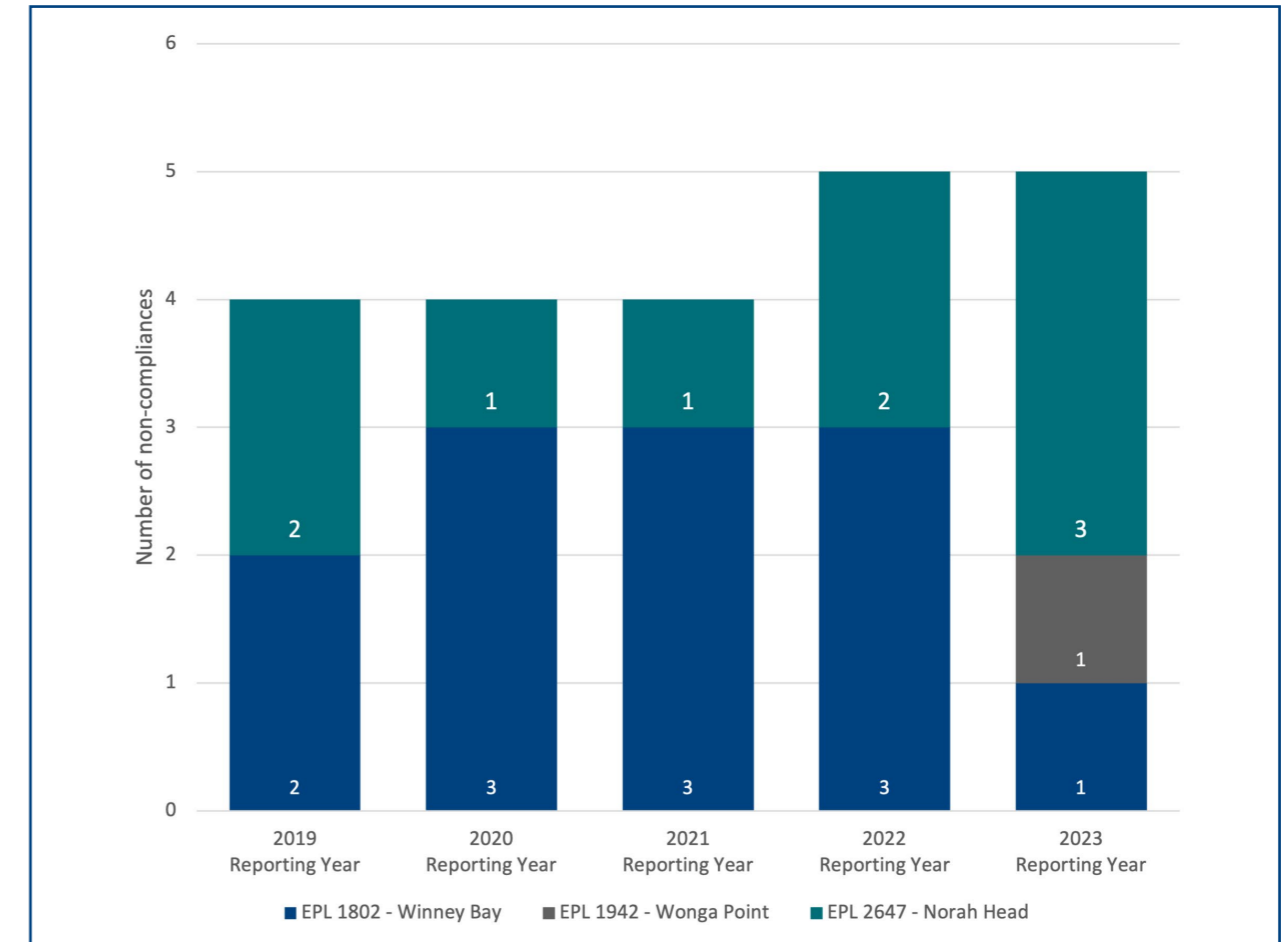
## Number of wastewater overflows reported to the environmental regulator, per 100km of main



Targets have been aligned to those set by IPART, noting that future targets are to be established in consultation with the community.

The number of overflows reported to the environmental regulator includes blockages in pipelines typically caused by tree roots as well as wet weather overflows resulting from inflow and infiltration to the sewerage network. While the number of overflows caused by tree roots has been decreasing, wet weather events continue to impact the network. Increased expenditure in gravity sewer main renewal programs is reducing the overall number of wastewater overflows. Additional works to reduce inflow and infiltration into the sewerage network are commencing in 2023-24 including inspections, pipe relining and management of illegal stormwater connections. Upgrades of sewage pumping station mechanical and electrical assets are also ongoing to improve reliability of the sewerage network.

## Number of Environment Protection Licence (EPL) non-compliances



Council is required to submit an Annual Return for each licence to the Environment Protection Authority (EPA), on the licence anniversary date. Details for the 2023 reporting year are as follows:

### EPL 1802 - Winney Bay (Kincumber and Woy Woy STP)

**Performance outlier:** Calculated load of total nitrogen was 247,970 kg, greater than the load limit of 227,682.20 kg specified in the EPL.

**Reason:** The nitrogen load was elevated due to mechanical failures and process optimisation issues at Kincumber and Woy Woy sewage treatment plants.

### EPL 1942 Wonga Point (Bateau Bay STP)

**Performance outlier:** Ammonia concentration of 40 mg/L was above the EPL limit of 30 mg/L.

**Reason:** Process optimisation issues occurred on one occasion at the commencement of the December holiday period which impacted on ammonia removal at that time.

### EPL 2647 Norah Head (Manning Park, Gwandalan, Charmhaven, Toukley and Wyong South STPs)

**Performance outlier:** Calculated annual total nitrogen, zinc and total suspended solids were greater than the load limits specified in the EPL.

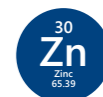
**Reason:** A combination of process issues at Charmhaven sewage treatment plant, and the transfer of solids from Charmhaven and Wyong South sewage treatment plants whilst pumping out water from the wet weather ponds following a long period of wet weather.



**Nitrogen:** a nutrient essential to all life but may interfere with ecological processes in high concentration.



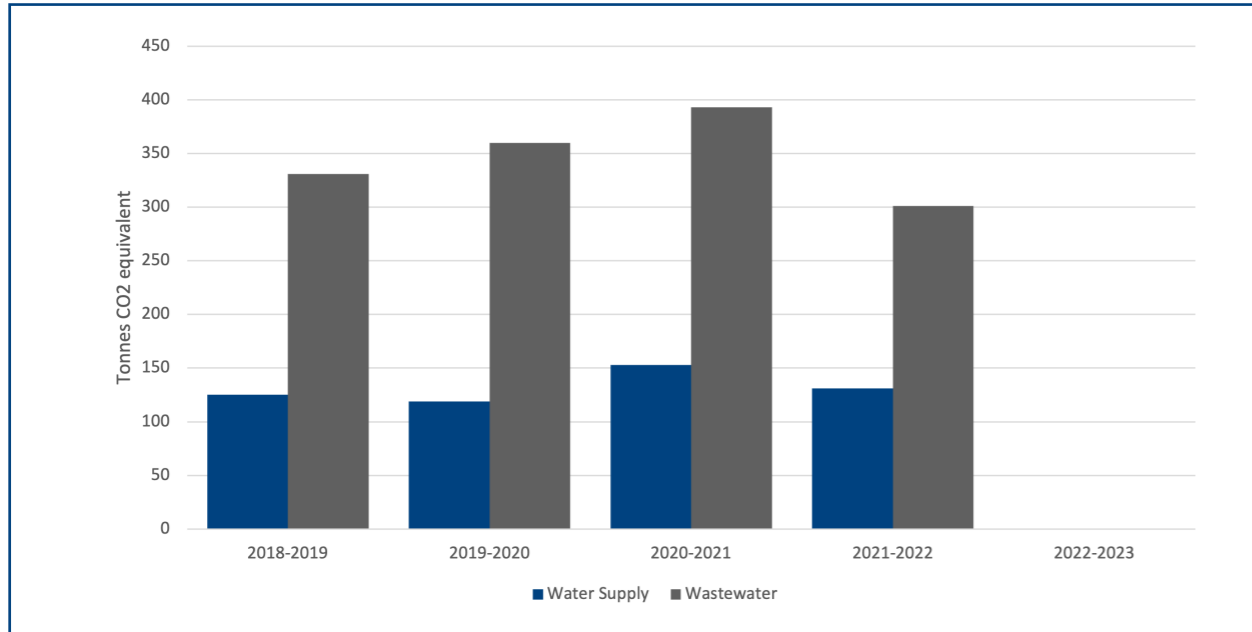
**Suspended solids:** are undissolved solid components of effluent that may produce visible plumes and interfere with biological processes at high concentration in an aquatic environment.



**Zinc:** a heavy metal that is an essential nutrient but may cause toxic effects at high concentration.



## Net greenhouse gas emissions per 1,000 properties



Data for 202-23 was not available at the time of publication as it is dependent on energy bills from our supplier which are not due until after September.

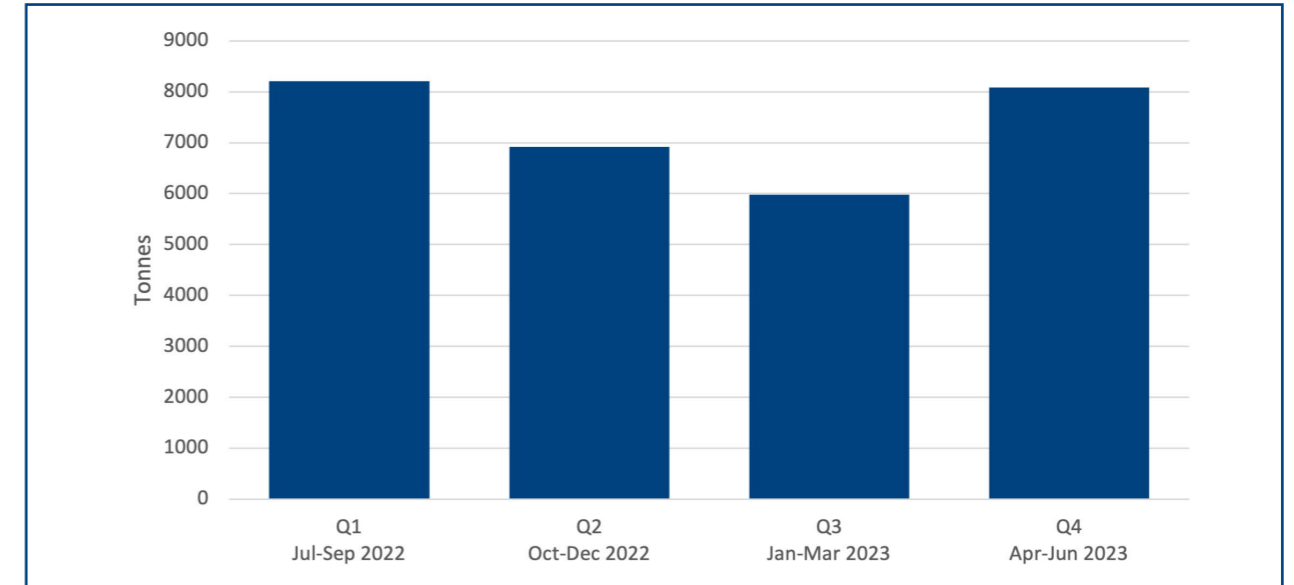
Data for 2022-23 is dependent on energy bills from our supplier and is not due until after September.

Greenhouse gas emissions from water utility activities are primarily generated during the treatment of sewage, as the removal of organics and some nutrients in the waste stream results in the emission of carbon dioxide along with other greenhouse gases, particularly methane and nitrous oxide.

Pumping and treatment of water to produce drinking water and to remove pollutants from sewage is very energy intensive. Water utilities are therefore indirectly responsible for greenhouse gas emissions produced from electricity generated from fossil fuels. Other sources of greenhouse gas emissions include electricity used in office buildings and fossil fuels consumed by the vehicle fleet.



## Volume of biosolids reused

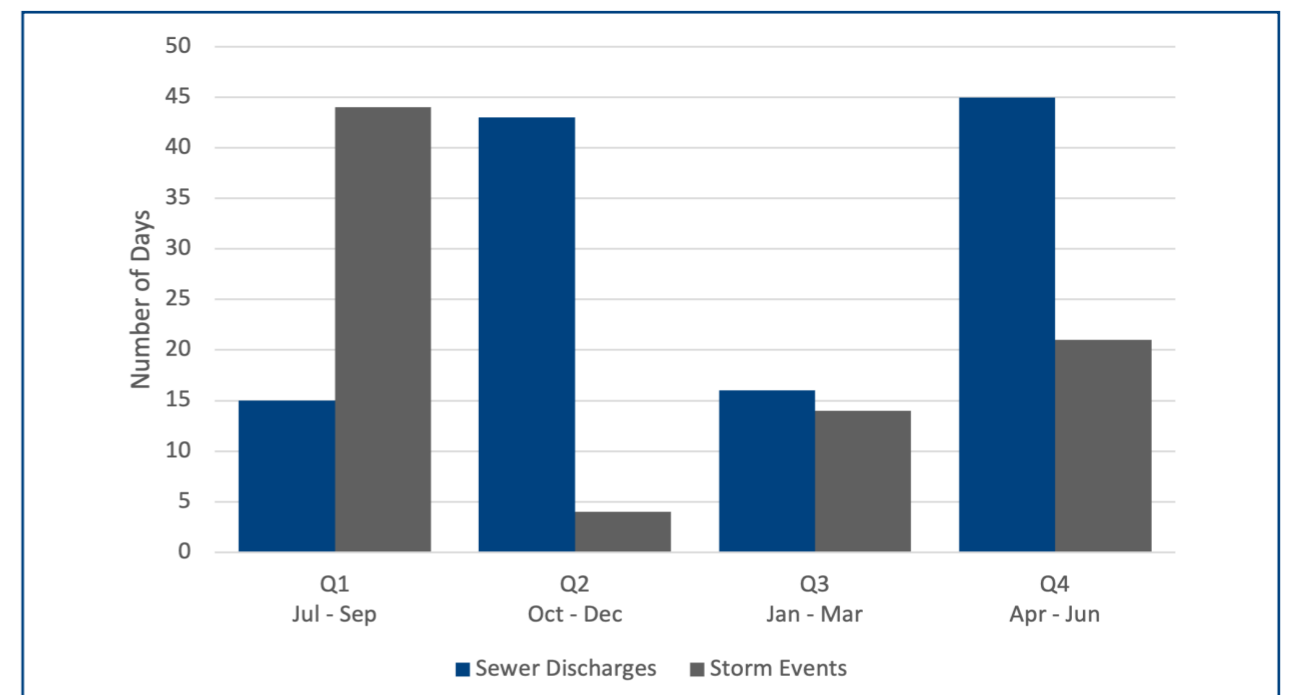


Biosolids are derived from wastewater sludge, mainly a mix of water and organic materials that are a by-product of the sewage treatment process. Most wastewater comes from household kitchens, laundries and bathrooms.

The tonnage shown represents all biosolids entering Buttonderry Waste Management Facility and biosolids from Woy Woy and Kincumber Sewerage Treatment Plants applied to land.

Some of these biosolids are delivered to a network of farms for land application carried out under strict biosolids guidelines. The other portion is composted to produce stable composts and soil conditioners.

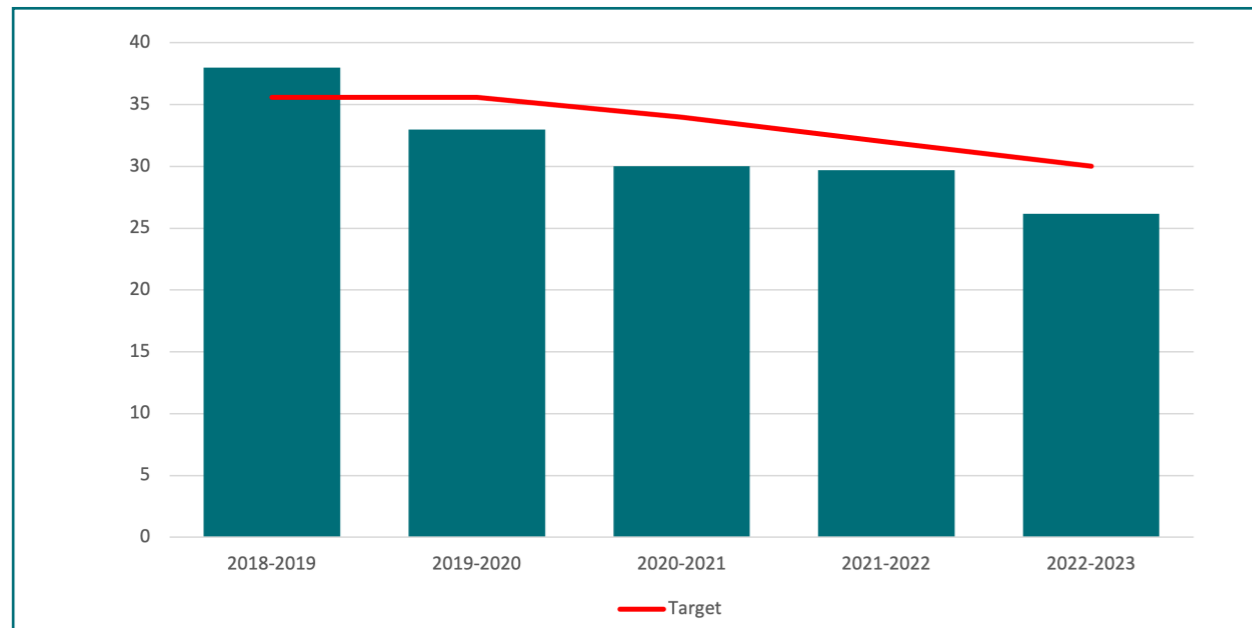
## Number of days that beaches and lagoons are not swimmable as a direct result of mains breaks or discharges



Sewer discharges occur for a number of reasons including failure of pipelines, due to age or damage; blockages caused by tree roots growing into the pipe or inappropriate materials being flushed such as fats and oils, wipes and cloth; high volumes of flow due to illegal stormwater connections to sewer; and inflow from floodwater.

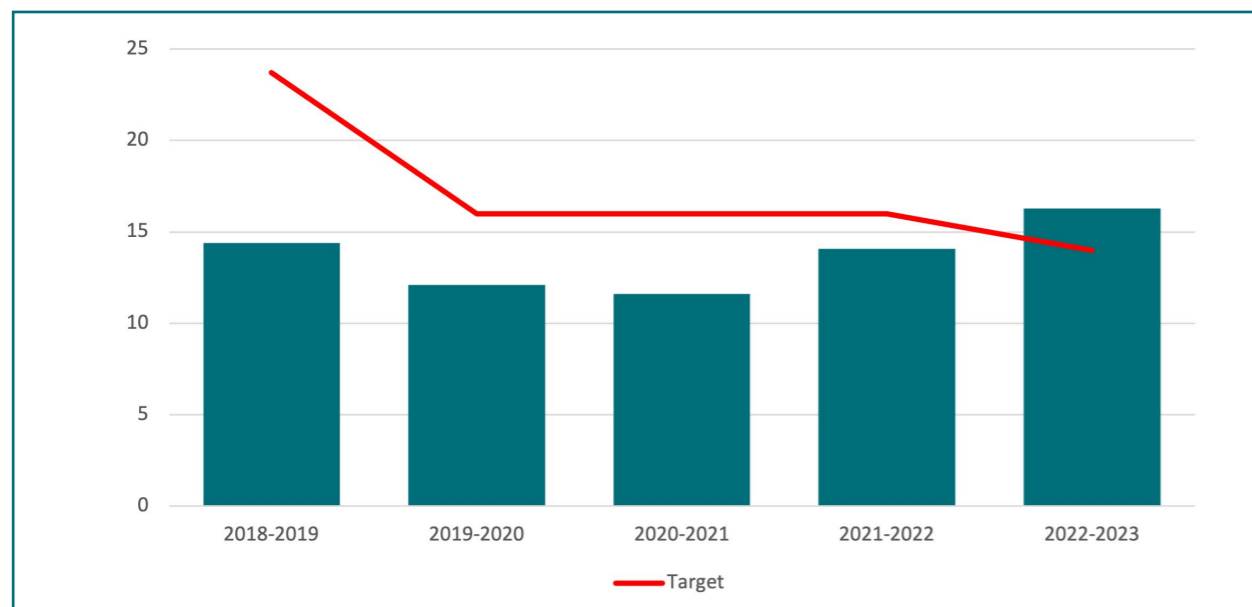
# Asset and financial management

## Wastewater main breaks and chokes, per 100km main



Targets have been aligned to those set by IPART, noting that future targets are to be established in consultation with the community.

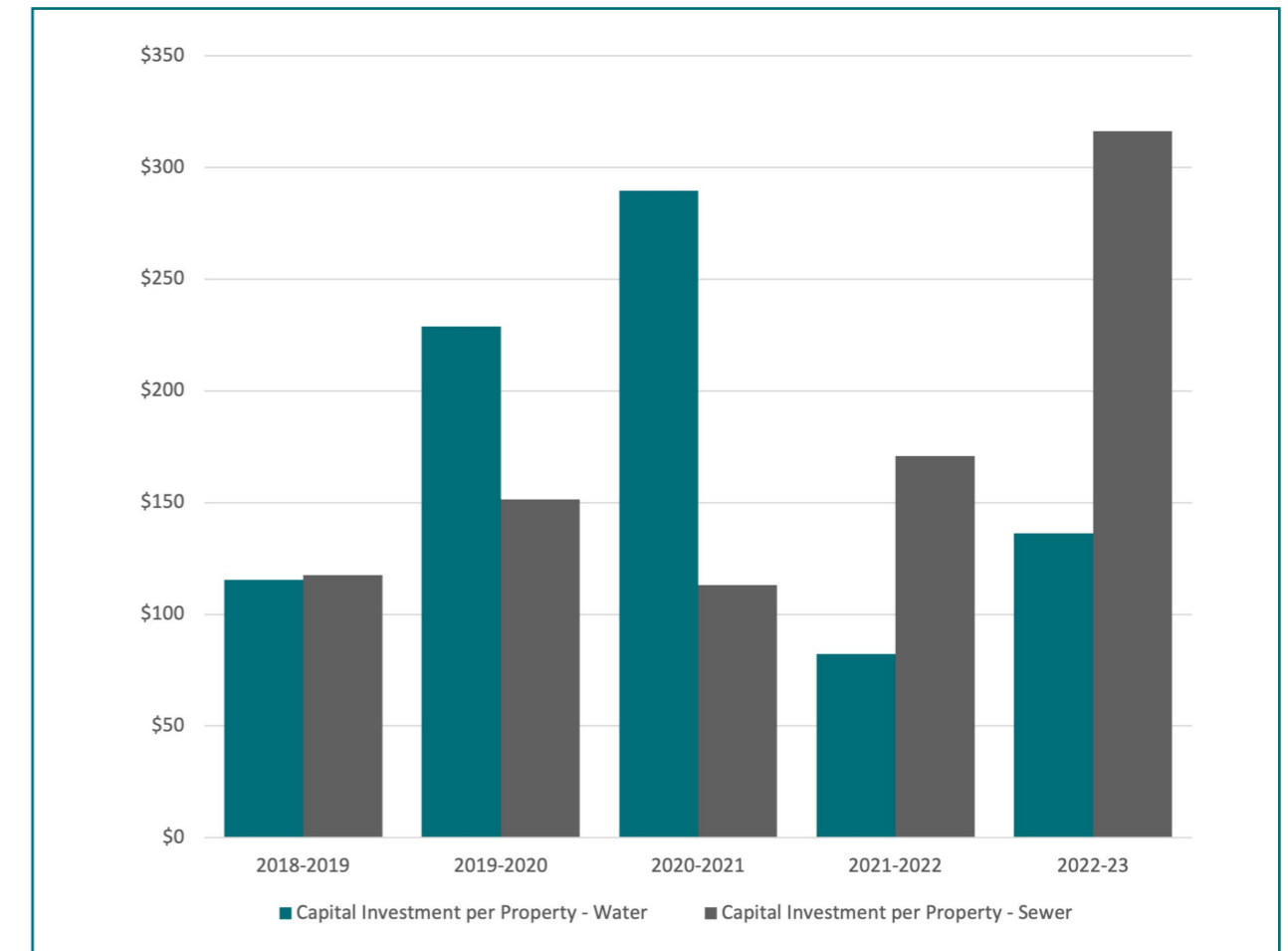
## Water main breaks, per 100km of main



Council has observed a significant increase in water main breaks during May and June 2023 resulting from soil movement (expansion/contraction). This is attributed to a recent drier period of weather following the last La Nina cycle.

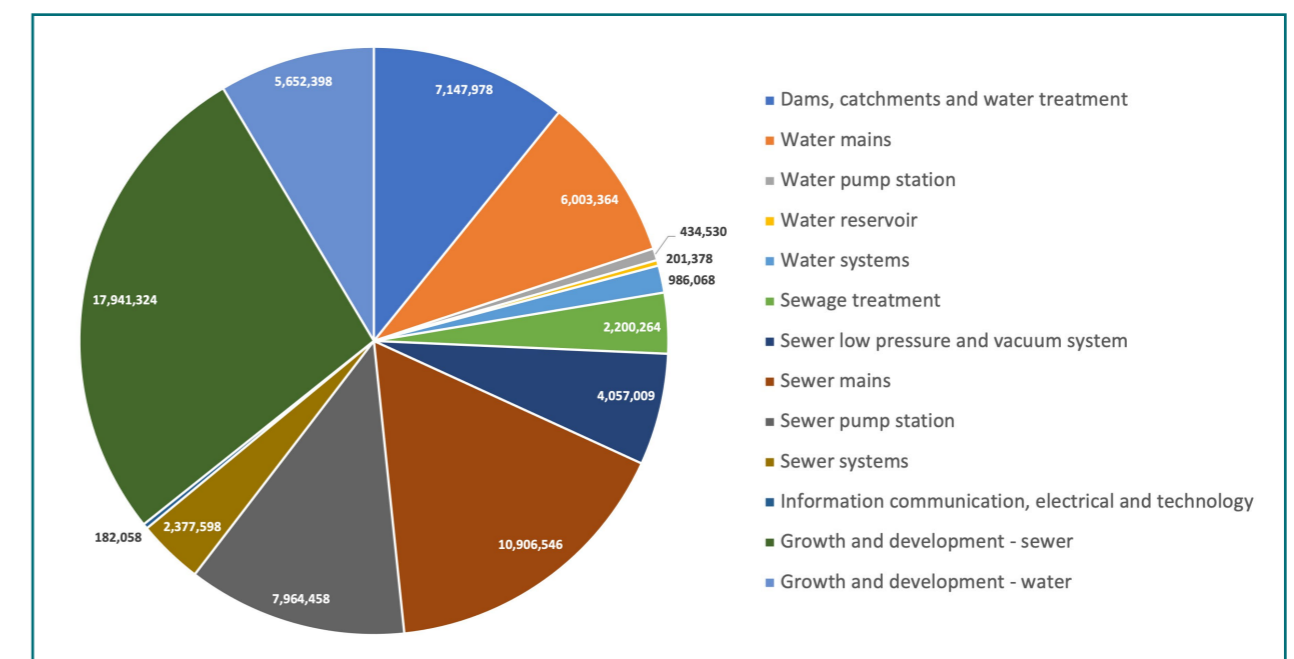
Council's water main renewal program is forecast to significantly increase in scale from 2023-24 to address deteriorating asset performance over time. Performance has not achieved the current target, however it remains better than the national average and other similar sized water authorities.

## Capital investment per property

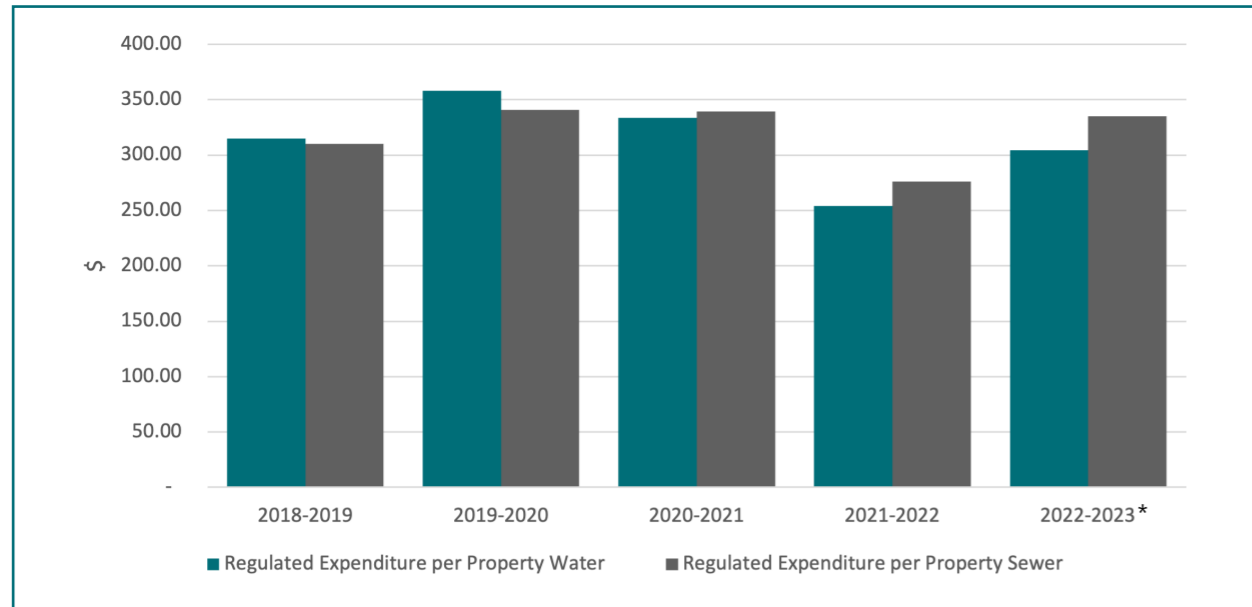


Total capital investment on Water and Sewer projects in 2022-23 was over \$20M (water) and \$45M (sewer) respectively.

## Category of costs in 2022-23



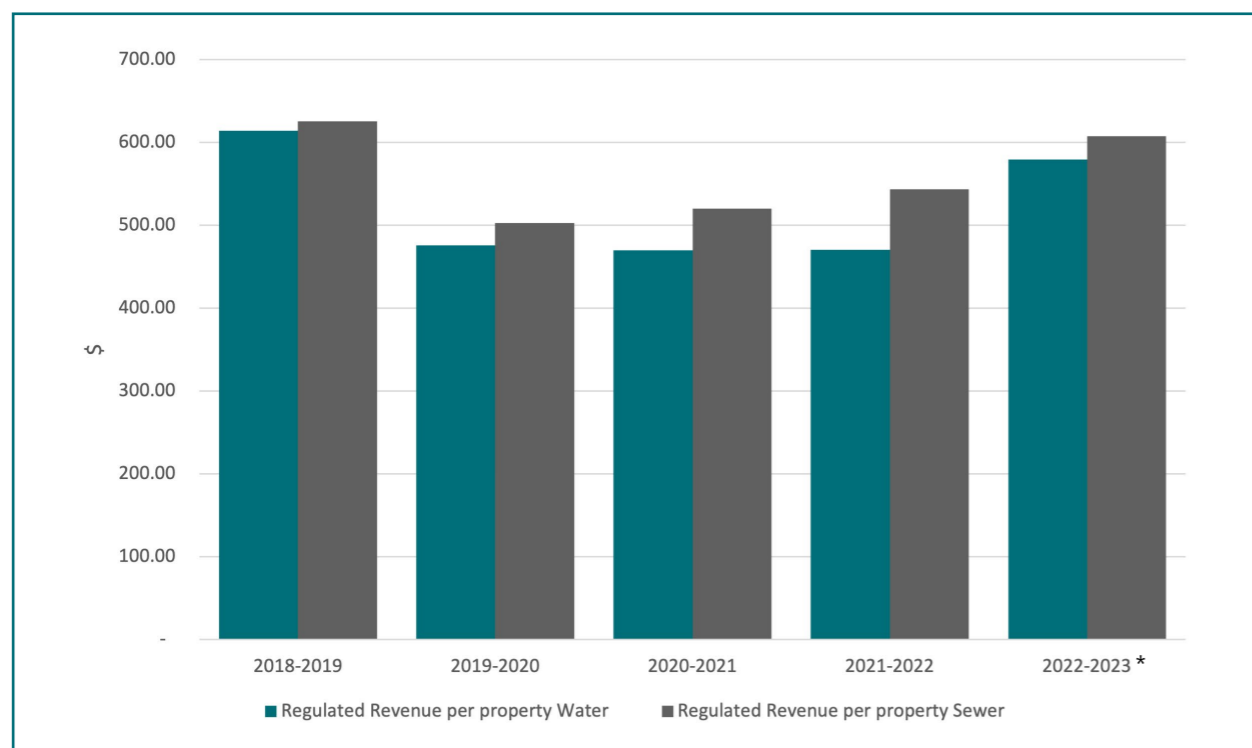
## Operating results - expenditure per property



Regulated expenditure excludes depreciation and borrowing costs.

\* Based on unaudited 2022-23 financial results.

## Operating results - income per property















This graph shows the average value of water and sewer rates per property received by Council. IPART sets the maximum prices that Council can charge for water and sewer services.





\* Based on unaudited 2022-23 financial results.

## Infrastructure upgrades and new infrastructure projects – planned and completed

### Delivering key projects - Water and Sewer has undertaken several projects to improve our assets and their performance. These included:

-  Contract awarded for the Mardi Water Treatment Plant design and upgrade. The upgrade will secure our water supply for the future
-  Additional funding secured through the NSW Government Acceleration Infrastructure Fund for the Gwandalan Treatment Plant upgrade and infiltration improvement program
-  Contracts awarded for delivery of 23 construction packages in 2023-24
-  Refurbishment of 11 sewer pump stations
-  Sewer rising main extension at Bungary Road Norah Head
-  Partial rising main replacement at Gwandalan
-  Water main renewal at Hardys Bay
-  Delivery of 23km of upgraded sewer mains
-  Delivery of 5.5km of water main renewals
-  Housing Acceleration Fund for Gosford Central Business District progressing with 42 projects completed overall, and a further 24 projects remaining
-  Sewage treatment plant clean out of the digesters resulting in an improvement in our environmental performance
-  New Mangrove Creek Dam Visitors Space

### Planning and design work underway for the major upgrade of four sewage treatment plants across the region to improve treatment and capacity

-  Sewage Treatment Plant Major Augmentation Works - Charmhaven
-  Sewage Treatment Plant Process Improvements - Bateau Bay
-  Sewage Treatment Plant Major Upgrade - Gwandalan
-  Sewage Treatment Plant Upgrades - Wyong South

For more information, search 'Capital Works Program' at [centralcoast.nsw.gov.au](https://centralcoast.nsw.gov.au)

# Love water, use it wisely.


Visit [lovewater.centralcoast.nsw.gov.au](https://lovewater.centralcoast.nsw.gov.au)



# Get in touch


Our customer service centre can assist you anywhere anytime if you'd like to report an issue, make a request, or offer feedback.

## General enquiries, billing and payment difficulties

 (02) 4306 7900 – 8:30-5:00pm Monday-Friday

If you have hearing or speech impairments, call the National Relay Service on 13 36 77, and quote Council's contact number 02 4306 7900.

 [ask@centralcoast.nsw.gov.au](mailto:ask@centralcoast.nsw.gov.au)

 Search 'customer help' at [centralcoast.nsw.gov.au](https://centralcoast.nsw.gov.au)

 Council Office  
2 Hely Street, PO Box 20, Wyong NSW 2259

## Faults, services and emergencies

 (02) 4306 7900 – 24 hours/7 days

 Search 'water service interruptions' at [centralcoast.nsw.gov.au](https://centralcoast.nsw.gov.au)

Contact us about issues with:



WATER QUALITY



WATER PRESSURE



FAULTS & BLOCKAGES



ODOURS

## We invite you to

Take part in local community forums, in person or online, to provide feedback and learn about our projects and programs. Visit:

 [yourvoiceourcoast.com](https://yourvoiceourcoast.com)

Attend Council meetings. For more information, search 'council meetings' at [centralcoast.nsw.gov.au](https://centralcoast.nsw.gov.au)

## Keep in touch and up-to-date

Sign up to Coast Connect e-newsletter [centralcoast.nsw.gov.au/enews](https://centralcoast.nsw.gov.au/enews)

## Read the latest news online

 [centralcoast.nsw.gov.au/news](https://centralcoast.nsw.gov.au/news)

## Be water wise

 [lovewater.centralcoast.nsw.gov.au](https://lovewater.centralcoast.nsw.gov.au)





Water  
and Sewer

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**[lovewater.centralcoast.nsw.gov.au](http://lovewater.centralcoast.nsw.gov.au)**