



# Water Outlook

for South East Queensland

December 2014

# About the Water Outlook

---

Ensuring residents of South East Queensland (SEQ) enjoy a safe, secure and reliable water supply is the job of Seqwater and the region's water service providers.

Every day we are working together to achieve the best whole-of-system solutions and provide a high quality water supply to customers at the best value for money.

Whatever challenges our climate throws at us - drought, storms or high rainfall - we all need to be ready to adapt to changes in our catchments and water supply.

As water service provider partners, we work to ensure the network is ready for any extreme weather events or other changing conditions.

The *Water Outlook* details our preparations as we head into summer 2014-15, with information about our dam supply levels, water consumption and the weather forecast.

The *Water Outlook* also details the changes we are making to improve the way we deliver water services to you, and what action you can take to ensure you and your family are ready for the summer ahead.

## Who we are

The SEQ Water Service Providers Partnership comprises Seqwater and your local water retailers.

As the region's bulk water authority, Seqwater sources, stores and supplies water from its 26 dams, 51 weirs and 14 bores and aquifers. Unitywater, Queensland Urban Utilities and the water businesses of the Redland, Logan and Gold Coast city councils deliver drinking water to households and businesses, and provide sewerage services.

Together we ensure the regional water supply network is ready to meet the demands of a growing community.

---



# Our drinking water supply

---

We have good water security across the region, with the current drinking water supply capacity of the 12 key dams at around 80%.

These 12 dams make up nearly 90% of SEQ's total water storage volume, with our largest dam, Wivenhoe, storing more than half of this water when at full supply capacity.

We catch the rain falling across more than 1.2 million hectares of catchments and rivers flowing into our dams, aquifers and off-stream storages.

Rainfall can be unpredictable and so can the inflows to our dams. Some of our storages only need a small amount of rainfall to fill - others need hundreds of millimetres of rain to record a change in their water levels.

South East Queensland benefits from an interconnected bulk water supply network that allows Seqwater to move

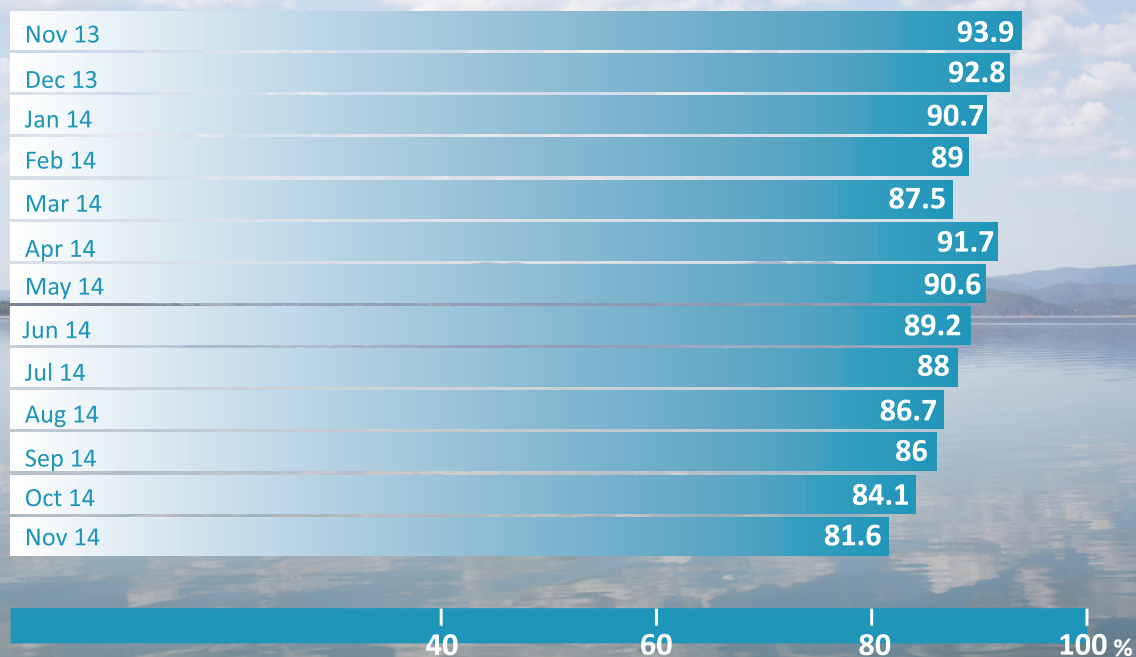
water around the region to where it is needed. The network is particularly important in times of drought, or where water quality issues or required maintenance affect part of the supply system.

With almost 600 kilometres of bulk water supply pipelines, we can efficiently transport water, from the Sunshine Coast, to greater Brisbane, to Redlands, Logan and south to the Gold Coast.

This ensures our region has a reliable, high quality water supply, even when some dam water levels are lower due to the dry conditions or because the water level has been lowered as part of Seqwater's Dam Improvement Program.

The Dam Improvement Program ensures the security of future water supply. In the coming years, seven dams across the region will be part of the program. Learn more at [seqwater.com.au/damimprovement](https://seqwater.com.au/damimprovement).

### Average monthly volume of 12 key dams / November 2013 - November 2014





# Our water consumption

---

The average daily water consumption across SEQ in November 2014 was 190 litres per person per day.

This relatively modest consumption shows residents of SEQ continue to be water wise, even in the absence of water restrictions.

Our level of water security gives consumers choice about how they use their water.

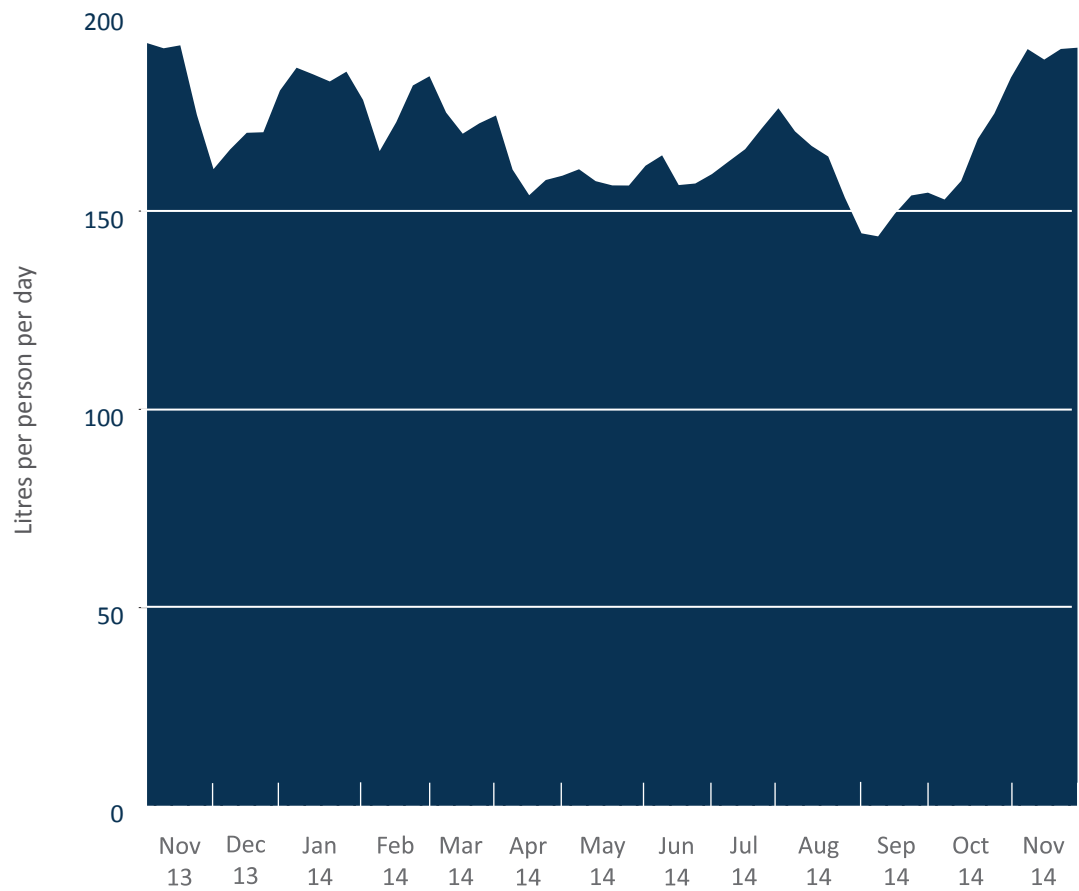
Although we currently enjoy a good level of water security, conditions can change and our water usage may need to change with them.

Making smart water choices all year round will save you money and protect our water supply. One of the reasons we continue to enjoy good water security is the sustained lower water consumption across the region since the Millenium Drought.

With hot, dry conditions forecast this summer, we are closely monitoring dam water supply levels and community consumption.



Average daily consumption in SEQ / November 2013 - November 2014



**Before the Millenium  
Drought**  
330 litres per person  
per day

**At our best during the  
drought**  
124 litres per person  
per day

**November  
2014**  
190 litres per person  
per day

# Hot, dry summer ahead

---

The Bureau of Meteorology forecasts a drier than average summer for Queensland, with warmer than average days and nights.

Warm tropical Pacific Ocean temperatures and average to cooler than average temperatures around Australia's northern coasts are the major influence.

Average to below average tropical cyclone activity is expected this season. On average, four tropical cyclones make landfall in Australia each year.

The Pacific Ocean has shown some renewed signs of El Niño development. The Bureau of Meteorology forecasts there is at least a 70% chance of El Niño occurring.

El Niño refers to the extensive warming of the central and eastern tropical Pacific that leads to a major shift in weather patterns across the Pacific.

El Niño events are associated with an increased probability of drier conditions.

The Bureau of Meteorology suggests regardless of whether an El Niño weather event is declared, there is an increased chance of some El Niño-like impacts this summer.

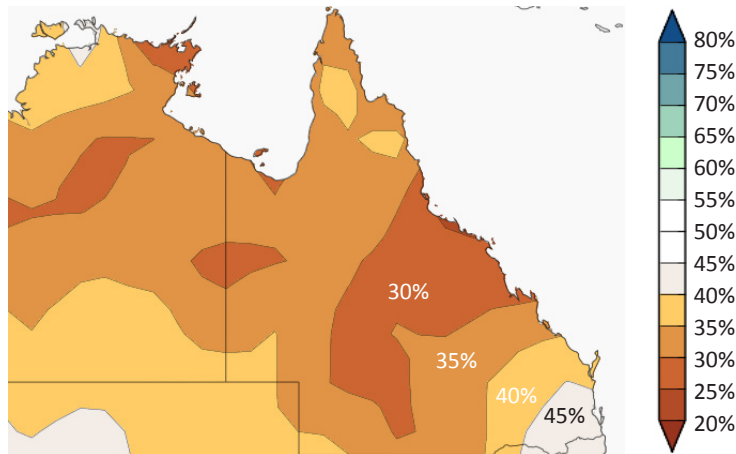
For many parts of Australia, this suggests below average rainfall and above average temperatures in the months ahead.

*Source: This information was sourced from the Bureau of Meteorology website [bom.gov.au/climate/outlooks](http://bom.gov.au/climate/outlooks) following the issue of the December to February seasonal climate outlook on 27 November 2014.*



## Chance of exceeding the median rainfall

December 2014 to February 2015



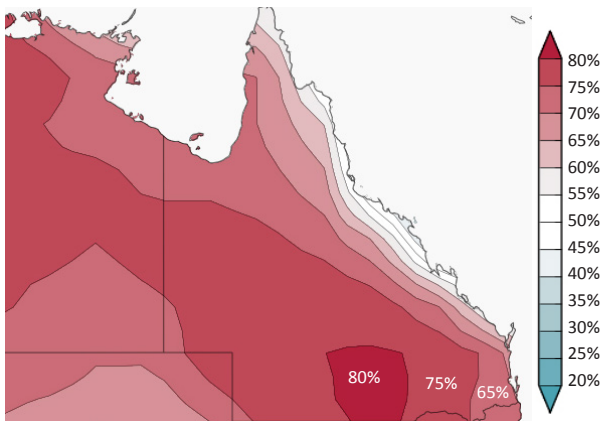
<http://www.bom.gov.au>

Climate Outlook - issued 27 November 2014

(c) Commonwealth of Australia 2014, Bureau of Meteorology

## Chance of exceeding the median min temp

December 2014 to February 2015



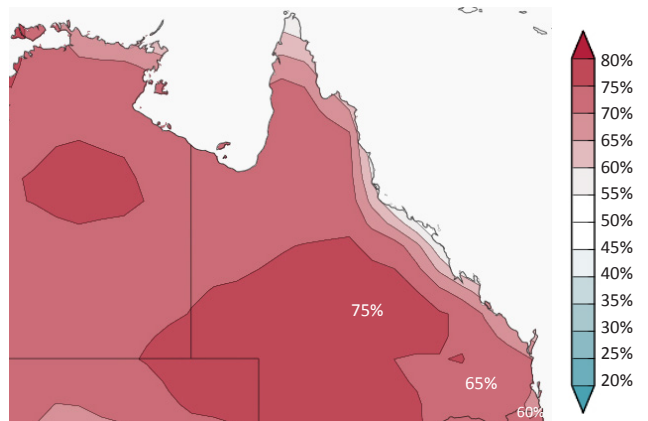
<http://www.bom.gov.au>

Climate Outlook - issued 27 November 2014

(c) Commonwealth of Australia 2014, Bureau of Meteorology

## Chance of exceeding the median max temp

December 2014 to February 2015



<http://www.bom.gov.au>

Climate Outlook - issued 27 November 2014

(c) Commonwealth of Australia 2014, Bureau of Meteorology

# Our water security

---

The water inflows into our storage dams vary depending on the amount and distribution of rainfall and catchment conditions. Drier catchments result in less runoff into the dams.

Considering the Bureau of Meteorology's forecasts and historical data, and starting with a combined November average storage level of 81.6% in our key dams, the graph on the next page shows the dam storage levels that could result if the inflows into the storages over the next 12 months were either average, low or the worst on record.

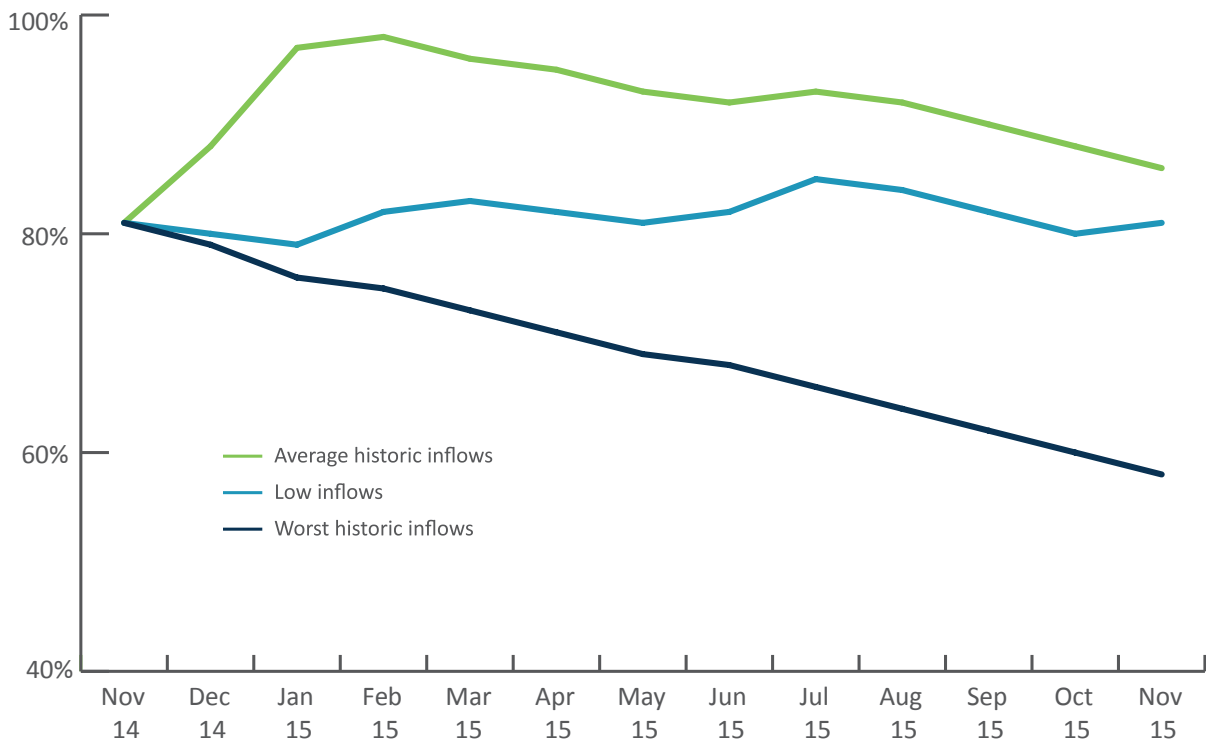
If we receive average inflows, the dams may reach 96% capacity by the end of March 2015. If we receive close to the worst historical inflows on record, the combined storage level may reach 73% by March 2015.

The drawdown of the storages is affected by inflows, rainfall, evaporation and demand.

The warmer than average conditions predicted for the summer may lead to higher demand on our storages and increased evaporation.

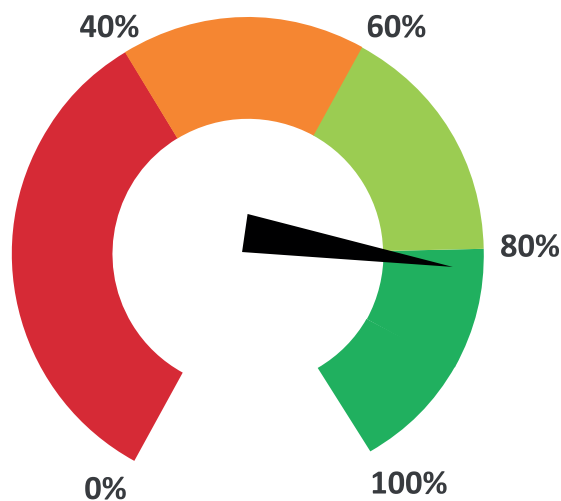
Our water security is expected to remain medium-high to high at the end of summer, based on the Bureau of Meteorology's forecasts, our current water consumption data and dam storage predictions.

Combined key dam levels / November 2014 - November 2015



Water security gauge

- High water security
- Medium - high water security
- Medium - low water security
- Low water security



# Get ready

---

Summer generally brings with it unpredictable weather.

Storms, heatwaves, bushfires and cyclones are some of the severe weather events South East Queenslanders may experience during the warmer months.

Your water service providers have been working hard throughout the year to make sure the water supply network is ready to meet the challenges Mother Nature decides to throw at us.

While we've been in 'get ready' mode, we hope you have been too - if not, it's never too late to start.

Our handy checklist is one way you and your family can ensure you're prepared to handle any emergencies that may affect your water supply.



## How we're getting ready

- ✓ We have ongoing investment and maintenance programs to ensure a safe and reliable water supply and sewerage service. We have plans in place should emergencies occur any time of the day or night.
- ✓ We've updated and tested the water sector's Emergency Response Plan, involving all water service providers, the Department of Energy and Water Supply and Queensland Health.
- ✓ We've put in place contingency plans to help critical water customers like hospitals.
- ✓ We've readied generators for pump stations and water boosters in case of power outages.
- ✓ We have trained and experienced crews on stand-by 24 hours a day, 7 days a week to respond to water quality and supply emergencies, in the unlikely event they occur.
- ✓ We've conducted risk assessments of all dams, water treatment plants, reservoirs and pipelines to ensure they are ready to meet the demands of summer.
- ✓ We've updated emergency action plans for all 26 Seqwater dams across SEQ.
- ✓ We've updated our Flood Operation Manuals for Wivenhoe, Somerset and North Pine dams, in response to recommendations of the optimisation studies conducted on these dams.
- ✓ We've launched a *Play it safe* campaign to educate the community about responsible behaviour at dams, lakes, parks and weirs.
- ✓ We continue to conduct regular water quality tests to ensure the quality of supply and protect public health.

## How you can get ready

- ✓ Have an emergency plan in place. For tips, visit [qld.gov.au/getready](http://qld.gov.au/getready).
- ✓ Keep at least three days' water supply (10L per person) in case of interruptions. Have your water supplier's emergency contact details on hand to report faults.
- ✓ Check your meter reading regularly to detect leaks. Know how to turn off your water supply.
- ✓ Check your gutters and other plumbing are in good working order, or ask a licensed plumber to do so on your behalf. Leaks are best found before heavy rainfall!
- ✓ Check your overflow relief gully is clear of obstructions, loose fitting and raised above ground level. This ensures stormwater does not flow into it and helps prevent sewage backing up inside your home. If you're unsure, contact a licensed plumber to ensure you have not connected your stormwater to sewage.
- ✓ Sign up to receive alerts about dam releases or spilling dams at [seqwater.com.au/dam-release-information-service](http://seqwater.com.au/dam-release-information-service). Check to see if your local water service provider offers an alert service for essential service updates.
- ✓ Understand the risk of your home being affected by a bushfire, storm, flood or cyclone and how you can improve the safety of your home during a severe weather event.
- ✓ Plan ahead and *Play it safe* at our dams, lakes and parks during summer. Check our recreation and safety notices before you head out, and read our safety tips at [seqwater.com.au/playitsafe](http://seqwater.com.au/playitsafe)



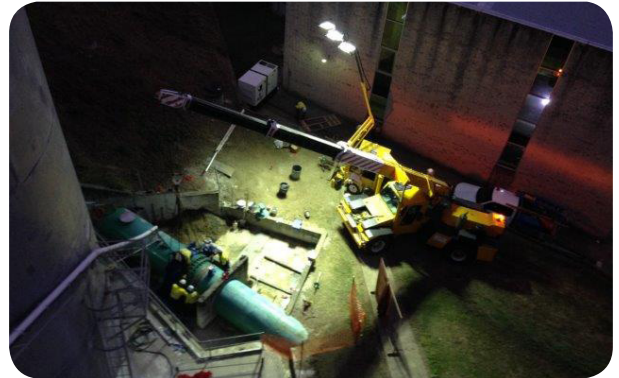
# Improving your water network

---

## Seqwater

### Maintaining Mt Crosby East Bank WTP

Seqwater completed a significant program of maintenance at our historic Mt Crosby East Bank water treatment plant (WTP), which opened in 1882. The plant is an essential part of the water supply network, providing all of Ipswich city's water and about half of Brisbane's supply on an average day. To conduct the work, the plant was shut down for three days for the first time in more than 50 years, with teams working around the clock to replace and maintain ageing assets to improve plant operability, reliability and safety.



### Replacing Molendinar WTP filters

We replaced the filters at Molendinar WTP on the Gold Coast to ensure the continued reliable operation of the plant, and to improve the effectiveness of our filtration. The filters were replaced one at a time to ensure uninterrupted water supply. The scope of each filter upgrade included internal structure refurbishment. We raised the weir wall, replaced launders, resurfaced the filter walls and floor, repaired wall join seals and racks, repaired the gullet below the washout channel and replaced nozzles. The result is an improved water supply for customers on the Gold Coast.



### Developing our Catchment Greenprint

Our Catchment Greenprint sets out Seqwater's vision and strategy for catchment management. A long term adaptive plan, the Greenprint enables us to work with other organisations and groups to deliver better catchments and ensures there is a clear understanding of direction and priorities.



*Workers conducting maintenance at the historic Mt Crosby East Bank water treatment plant*



# Unitywater

## Catering for growth

A \$17 million upgrade to the Maleny Sewage Treatment Plant (STP) completed in June 2014 is an investment by Unitywater in 'green engineering'. The plant's innovative, environmentally-sensitive design incorporates 30 hectares of irrigated forest and wetlands to trap sediment and recycle nutrients. Through this project, Unitywater is assisting local efforts to restore biodiversity within the Maleny district.

We are also undertaking a major upgrade to the Nambour STP to cater for anticipated population growth within the geographical catchment area. Looking to deliver a long-term, sustainable solution, this upgrade is focused on being both cost-effective and environmentally beneficial. New technology at the plant will also contribute to waterway health in the lower reaches of the Maroochy River.

We have developed an innovative solution to cater for communities in the growth corridor from Twin Waters to South Marcoola. The decommissioning of the at-capacity Suncoast STP, together with the construction of a 6 km transfer pipeline connecting to the Maroochy STP, has provided a more flexible operating network and maximises the use of existing assets with positive environmental outcomes.

## Improving water mains

The Sunshine Coast communities in Maleny and Pacific Paradise will benefit from new water main projects. For Maleny, this work enhances local water pressure and improves fire-fighting capacity within the township.

The Pacific Paradise project averts a potential supply deficiency in the broader region and caters for future demand anticipated at the Coolum and Peregian reservoirs.

We continue to encourage residents to check for water leaks. Undetected leaks due to cracked pipes can have significant impacts and raising community awareness is part of an overall detection and repair strategy. Information and education on checking water meters regularly underpins this initiative.

## Reducing sewage overflow

Unitywater's campaign to raise awareness within the community about the potential of sewage overflows during wet weather is a priority. Simple tips are at the core of this educational initiative, which complements the ongoing Sewage Overflow Abatement Program.



*Maleny sewage treatment plant*

---

# Queensland Urban Utilities

## Innovation driving efficiency

Since the launch of our Innovation Program 12 months ago, Queensland Urban Utilities has developed 44 innovations which will lead to operational savings of up to \$5.7 million. We are sending robots down sewer pipes, building wetlands on floating mattresses to purify wastewater and investigating the use of unmanned aerial vehicles to inspect water reservoirs.

We have also moved into the area of biosolids, which involves converting waste into energy and other useful products. At our sewage treatment plants we are now generating electricity from the gas created in the treatment process and developing a way to turn sewage sludge into fertiliser.

## Improving waterway health

Our Australian-first water quality offset project at Beaudesert is helping improve local waterway health. We have reshaped a badly eroded section of the Logan River and replanted it with thousands of trees to reduce the amount of sediment and nitrogen entering the waterway. By undertaking this \$1 million project we have avoided an \$8 million upgrade of the Beaudesert Sewage Treatment Plant, delivering a cost saving of \$7 million.

## Turn to Tap

We are encouraging people to reduce their use of single-use plastic bottles and 'Turn to Tap'. By carrying a reusable drink bottle and filling up on tap water we can all help the environment and save money. Single-use plastic bottles are the most common item of rubbish found in South East Queensland waterways. They also contribute to landfill, with only a third of single-use plastic bottles being recycled. Tap water also costs less than one cent per litre compared to up to \$3 per litre for bottled varieties.

## Building for the future

We are continuing to cater for future growth by investing in new water and sewerage assets across our five local council regions. Some of our latest projects include:

- Woolloongabba Sewer Upgrade – 5 km of new trunk sewer mains were installed in our biggest project on record. The five year \$82 million project was delivered ahead of schedule and \$3.7 million under budget.
- West End Sewer Upgrade – \$3 million was invested to build a new 500m sewer along Mollison Street in West End.
- Water main replacement program – \$44 million will be spent replacing more than 36 km of water mains across our five local council regions in 2014-15.
- Rosewood Sewer Upgrade – \$5 million is being invested in upgrading the sewerage network in Rosewood. The project includes a new \$3.5 million sewage pump station.



*East Brisbane State School named Queensland Urban Utilities' Woolloongabba sewer tunnel boring machine 'Cora'.*

# Logan City Council

## Preparing for growth

Work on the \$4.8 million New Beith trunk water main in Logan City was completed in September 2014, with 3.7 km of 600mm diameter water pipelines and associated infrastructure constructed to supply water from the Southern Regional Pipeline in Teviot Downs to the 20 megalitre Round Mountain Reservoir.

This will facilitate water supply to customers in North Maclean, South Maclean, Munruben and the Greater Flagstone Development Area. The pipeline will also provide immediate operational efficiency improvements within the local water network.

A \$6 million project to construct almost 2 km of new 500mm diameter wastewater pipeline between Bethania and Tanah Merah in Logan City has begun. The new pipeline will help transport growing wastewater flows from Logan's eastern catchment to the Loganholme Wastewater Treatment Plant more than three kilometres away.

Current estimates indicate that Logan's eastern catchment will grow by more than 55 per cent upon ultimate development of the area. The new pipeline will free up much-needed capacity within the nearby Beenleigh network when it is completed by June 2015, weather and construction conditions permitting.

## Upgrading the wastewater network

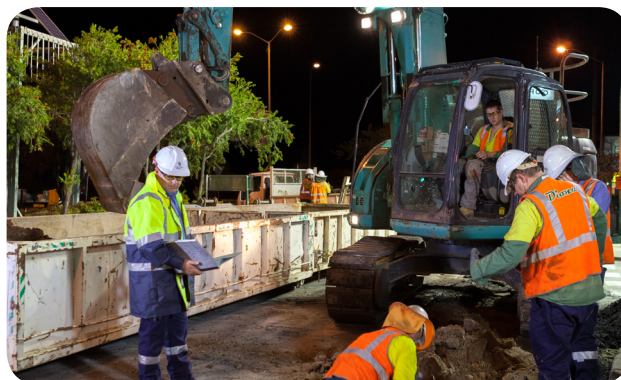
The final stage of a \$30 million major wastewater network upgrade between Logan Village and Kingston will be completed by August 2015, weather and construction conditions permitting. The \$16.8 million project involves laying 3.4 km of wastewater pipeline between Crestmead and Kingston and constructing a new pump station in Logan Reserve.

The system will service major developments in Logan Village, Yarrabilba and the Park Ridge Master Planned Area, which will see the region expand rapidly within the next two years. The first two stages of the upgrade were completed in 2012 and 2013. The system will ultimately comprise more than 16 km of pipeline, four new pump stations, and dozens of valves, connection points, vents, access manholes and associated infrastructure.

## Servicing Beenleigh's CBD

Construction of a 1.2 km of water pipeline through Beenleigh's central business district is now complete, making way for the start of the \$9.7 million Beenleigh Town Square project. The \$1.6 million water pipeline will significantly improve the local water network.

The old pipeline has been decommissioned following a history of breakages. The new water pipeline, water hydrants, flow meters and valves were installed by Logan City Council's Logan Water Alliance.



*Night works at George St, Beenleigh, as part of an historic transformation project*

---

## Redland City Council

### Improving sewerage systems

Construction work is well under way at Dunwich to sewer two priority residential areas which were previously on septic tank systems. Major social and environmental benefits will be recognised when the sewer is commissioned in January 2015.

Design work has been completed for the construction of a new major pump station at the Cleveland Showgrounds. The proposed pump station will have capacity to handle the expected growth in the attractive Cleveland catchment.

It is expected that the new pumps, supported by an onsite emergency generator and storage, will provide very high reliability compared to the existing aged asset. The work will be completed in July 2015.

### Readying for emergencies

Continued fire flow augmentation programs to improve water availability for fire emergencies have been undertaken in Capalaba and Cleveland.

This work is part of an ongoing program of system improvements that ensure that water mains are able to adequately support fire protection as the city grows.

### Expanding the network

A 300mm diameter trunk water main was constructed from the Seqwater trunk water main system in Boundary Road to Kinross Road in Thornlands.

This expansion will support future development in the Kinross Road Structure Plan area.



*Commencing work on the Dunwich sewerage project*



# City of Gold Coast

## Planning for the future

The City of Gold Coast has successfully completed a \$1.2 million project for the long-term planning of our trunk water supply and sewerage infrastructure, covering the next 50 years. The Water Supply and Sewerage Infrastructure Plan 2014 will form part of our Local Government Infrastructure Plan, required for a new 2015 planning scheme.

The Infrastructure Plan also provides us with the means to closely align our water and sewerage infrastructure provision with the planned growth of the city, including projected high-growth areas such as the Gold Coast's proposed new CBD in Southport.

## Keeping our workers safe

We have introduced a \$7.21 million Fall from Heights program to prevent falls at sewerage and water pumping stations. The program will be delivered over four years and will involve the installation of handrails, and light weight lids and gratings over voids at the majority of our sewerage and water pumping stations across the city.

The program will significantly improve the safety of our operational staff and follows the recently completed \$4 million project to replace ladders with secure staircases and handrails at our water reservoirs.

## Improving efficiency and customer service

The City of Gold Coast has implemented an ICT Enterprise Resource Planning system to improve the efficiency and effectiveness of day to day operations. This system ensures an improved service to our customers, ultimately benefiting the quality of living for Gold Coast residents.

The contemporary maintenance management system is underpinned by a consolidated asset register. To get the most out of this investment, we have integrated the system with our Geographic Information System and provide mobile technology to our maintenance staff, allowing us to effectively manage our \$10 billion worth of assets.

Ultimately, we have improved access to asset data and maintenance information for everyone, improved maintenance planning and management for both planned and unplanned work, captured costs and maintenance history against assets, as well as provided capability to enable the integrity of asset data to be maintained through consistent processes, system controls and performance monitoring.



*A City of Gold Coast employee with one of the new iPads*

# Contact us

---



**(07) 3035 5500**

(Monday to Friday, 8.30am to 5.00pm)

**1800 771 497**

(After hours and on weekends)

**1800 613 122**

Dam release hotline

**email** [communications@seqwater.com.au](mailto:communications@seqwater.com.au)

**web** [www.seqwater.com.au](http://www.seqwater.com.au)

**facebook** [www.facebook.com/seqwater](http://www.facebook.com/seqwater)

**twitter** @\_seqwater

**LinkedIn** Seqwater



**1300 0 UNITY** (1300 086 489)

**email** [ask.us@unitywater.com](mailto:ask.us@unitywater.com)

**web** [www.unitywater.com](http://www.unitywater.com)

**facebook** [www.facebook.com/Unitywater](http://www.facebook.com/Unitywater)



**13 26 57**

(7am - 7pm weekdays)

**13 23 64** (24/7)

(Faults and emergencies)

**email** [customerservice@urbanutilities.com.au](mailto:customerservice@urbanutilities.com.au)

**web** [www.urbanutilities.com.au](http://www.urbanutilities.com.au)

**facebook** [www.facebook.com/QueenslandUrbanUtilities](http://www.facebook.com/QueenslandUrbanUtilities)

**twitter** @urbanutilities

**instagram** @urbanutilities

**LinkedIn** Queensland Urban Utilities

---





**(07) 3829 8999**

(Monday to Friday, 8am-5pm - answering service after hours for emergencies)

**email** [rcc@redland.qld.gov.au](mailto:rcc@redland.qld.gov.au) (not 24 hours)

**web** [www.redland.qld.gov.au](http://www.redland.qld.gov.au)

**facebook** [www.facebook.com/redlandcouncil](http://www.facebook.com/redlandcouncil)

**twitter** @redlandcouncil



**(07) 3412 3412**

(all enquiries - 24 hours)

**email** [council@logan.qld.gov.au](mailto:council@logan.qld.gov.au)

**web** [www.logan.qld.gov.au](http://www.logan.qld.gov.au)

**facebook** [www.facebook.com/logancitycouncil](http://www.facebook.com/logancitycouncil)

**twitter** @logancc



**1300 GOLDCOAST** (1300 465 326)

**1300 WATER** (1300 000 928)

**1800 637 000** (after hours faults and emergencies)

**email** [mail@goldcoast.qld.gov.au](mailto:mail@goldcoast.qld.gov.au)

**web** [www.cityofgoldcoast.com.au/water](http://www.cityofgoldcoast.com.au/water)

**facebook** [www.facebook.com/cityofgoldcoast](http://www.facebook.com/cityofgoldcoast)

**twitter** @cityofgoldcoast

