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1. Introduction

This Plan has been developed to satisfy the requirements of a water netserv plan (part A) for the City of Gold Coast (the City) as described in the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009. This Plan replaces the City’s Water and Sewerage Network Services Plan 2014.

1.1 Purpose of the document

The purpose of this Plan is:

(a) To provide for strategic planning for the operation of the City’s water business;

(b) To provide planning for the delivery of infrastructure for supplying the City’s water and sewerage services for at least 20 years;

(c) To ensure the provision of safe, reliable and secure water and sewerage services by the City;

(d) To integrate land use planning and planning for infrastructure for the City’s water and sewerage services;

(e) To provide for the management of the City’s water and sewerage services in a way that seeks to achieve ecological sustainability.

An outline of the specific requirements of a water netserv plan (part A) and how the requirements are addressed in this Plan is summarised in Appendix 1.

1.2 Review period

The South-East Queensland Water (Distribution and Retail Restructuring) Act 2009 specifies the process for making, amending and reviewing a water netserv plan. The City must review the water netserv plan every 5 years to ensure the plan meets the required criteria including:

• Ensuring the plan is consistent with the South East Queensland (SEQ) Regional Plan and the relevant planning assumptions;

• Ensuring the plan achieves the purposes of the plan (outlined above); and

• Reviewing the future connection areas under the Plan.

In addition, before 1 October each year the City is required to review the connection areas under the Plan.

In amending the water netserv plan, the City must have regard to the type of amendment (administrative, minor or major) and follow the legislative approvals process outlined in Section 99BRAA of the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009.

1.3 Corporate alignment / Organisational context

1.3.1 City Vision

The City’s overarching vision is ‘Inspired by Lifestyle. Driven by Opportunity’.

Underlying this vision are three key themes: Place, Prosperity and People. As reflected in Figure 1, the City is actively working towards achieving this Vision and its’ three key themes through the implementation of the Corporate Plan ‘Gold Coast 2022’.
Figure 1: Strategic alignment for delivery of the City’s vision

This Water Netserv Plan supports the implementation of ‘Gold Coast 2022’ and the delivery of key corporate strategies for the City by:

- Managing our resources for a sustainable future
- Planning for infrastructure that supports productivity and growth; and
- Planning for the future of the City.

1.3.2 Our business

The City is responsible for providing safe and reliable water, recycled water and sewerage services to customers in the Gold Coast under the South-East Queensland Water (Distribution and Retail Restructuring) Act 2009. This includes:

- The distribution and retail of safe drinking water purchased from Seqwater;
- collecting and treating sewage;
- providing recycled water and biosolids (a waste product of sewage treatment which is used as fertiliser) to customers to be reused;
- releasing excess recycled water to the environment; and
- planning, constructing and maintaining infrastructure and assets including:
- drinking water and recycled water reservoirs,
- pumping stations and pipelines,
- sewage treatment plants (STPs); and
- release points.

### 1.3.3 Our commitment

The City’s Water and Waste directorate is responsible for water, recycled water and sewerage services within the Gold Coast.

**Water and Waste’s vision:** We manage our resources for a sustainable future.

**Water and Waste’s values:** We take responsibility, we add value, we work as a team and we aim high.

**Water and Waste’s mission:** We protect the health and safety of ourselves, our community and our environment.

**Water and Waste’s goals:** Zero harm, satisfied customers, reliable services, financially responsible and skilled people.

Water and Waste along with the City, aspire to become a water sensitive city. We also align to the United Nations Sustainable Development Goals – a plan of Action for People, Place and Prosperity. We are here to change our World.

### 1.3.4 Water Strategy

The City’s Water Strategy adopts a bold approach to city design and infrastructure planning which recognises the importance of water as being central to our way of life, cultural identity, health and wellbeing, and a thriving economy.

The Water Strategy provides a pathway to an aspirational vision in which water has a central role in the City’s ambition to be a water sensitive city and is intended to achieve the following outcomes:

- Healthy catchments and waterways which preserve the Gold Coast regions international reputation for a thriving ecology, active recreation and liveability;
- Innovation in the provision of water services to support efficient, integrated, adaptive and sustainable outcomes for the community and the environment;
- A city in which vibrant water environments are central to the planning and design of growth;
- A city that is resilient to climate change and extreme events; and
- Partnering with a range of community, industry, government and research groups to deliver water sensitive outcomes

This Water Netserv Plan aligns with the Water Strategy.

*The City’s Water Strategy can be found on the City’s website.*

### 1.4 External policies and plans

There are a number of key planning documents prepared by the State Government and other agencies which are relevant to the preparation of the Water Netserv Plan.

#### 1.4.1 South East Queensland Regional Plan

The South East Queensland Regional Plan 2017 (also known as ShapingSEQ) is the statutory regional plan for the SEQ region. It provides a regional framework for growth management, which sets the long-term planning direction for sustainable growth, a globally competitive economy and high-quality living.
Measures identified in ShapingSEQ range from planning for a water sensitive region, to protecting drinking water catchments from inappropriate development.

In preparing this Plan, the City has ensured that it is consistent with ShapingSEQ.

1.4.2 Seqwater Strategic Plan & Water for life

Seqwater has developed a Strategic Plan (2018-23) based on the vision of ‘Water for life’. Within the plan, Seqwater outlines their purpose ‘is to source, store and supply treated water from catchments and alternative sources, ensuring a high quality and reliable water supply for our customers’.

This vision and purpose are consistent with that of the City.

Further to this, Seqwater has also developed the South East Queensland’s Water Security Program 2016-2046, which provides Seqwater’s plan for providing the region’s drinking water over the next 30 years. It also provides a commitment to working with stakeholders, customers and communities to develop an adaptive plan for a sustainable water future. Seqwater aspires to achieve the United Nations definition of water security.

Water security options identified for the southern subregion include upgrading the Molendinar WTP to 190 ML/day, upgrading the Gold Coast Desalination Plant (Stage 2) additional 45ML/day, demand management and decentralised schemes (such as rainwater and stormwater harvesting).

1.4.3 WaterQ: a 30 year strategy for Queensland’s water sector

‘WaterQ: a 30-year strategy for Queensland's water sector’ is a whole-of-sector strategy that sets out a high-level framework of priorities and actions to address the changes and challenges facing the water sector. WaterQ identifies seven strategic priorities and actions to build and maintain a ‘water sector that supports increased productivity, economic growth, strong and healthy communities, and a natural environment that is valued’.

WaterQ is one of several sector-specific strategies to achieve ‘a place that is vibrant and prosperous with the right catalysts to drive our economy, regions and communities’.

2. Activities

2.1 The water supply network

As a water service provider, the City is responsible for the distribution and retail of safe, reliable and secure drinking water across the Gold Coast. Appendix 2 contains a diagrammatic summary of the City’s role in delivering water to the Gold Coast.

The bulk water network is owned and operated by Seqwater (a State Government owned statutory authority). Bulk water supplied to the Gold Coast is generally sourced from the Hinze and Little Nerang dams (treated at the Mudgeeraba or Molendinar WTPs) and the Gold Coast Desalination Plant, but can also be supplied from other areas of SEQ including Wivenhoe Dam through the connection to the water grid and the Southern Regional Water Pipeline. Bulk water is purchased from Seqwater at various bulk water supply points across the Gold Coast. Bulk water meters are utilised to measure and charge the City for bulk water supply. Figure 2 provides an overview of the bulk water supply to the Gold Coast area.

The City of Gold Coast is then responsible for distributing the drinking water from the bulk water supply point to residents and businesses across the Gold Coast via a network of reservoirs, pump stations, and mains (pipes). Drinking water is used by households, businesses, and industry and for firefighting. An overview of the City’s drinking water network and catchments is provided in Appendix 3.

The City previously operated a Class A+ recycled water scheme, known as the Pimpama Coomera Class A+ recycled water scheme, however this scheme was closed as the high cost outweighed the value provided to the city. Much of the infrastructure for the scheme is still operated as a separate two supply system, utilising the drinking water supply. This scheme is currently considered part of the non-drinking water supply network,
however may be transferred to the drinking water supply network in the future following relevant testing, compliance and approvals.

The water supply system is regularly monitored for safety by both Seqwater and the Water and Waste directorate (on behalf of the City), at various locations, to ensure the drinking water quality meets the Australian Drinking Water Guidelines.

Each year the City prepares a report to the Department of Health summarising the performance of the water supply system. This report is available on the City’s website.

The key components of the City’s drinking water network are outlined in Table 1.

Table 1: Key components of the City’s water supply network (as at 30 June 2018)¹

<table>
<thead>
<tr>
<th>Description</th>
<th>Water Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of mains (kilometres)</td>
<td>3,278km drinking water mains</td>
</tr>
<tr>
<td></td>
<td>191km of non-drinking water mains</td>
</tr>
<tr>
<td>Number of water supply reservoirs</td>
<td>58 (drinking and non-drinking)</td>
</tr>
<tr>
<td>Number of water pump stations</td>
<td>56 (drinking and non-drinking)</td>
</tr>
<tr>
<td>Number of re-chlorination stations</td>
<td>5</td>
</tr>
<tr>
<td>Water connections</td>
<td>261,321 (drinking water)</td>
</tr>
</tbody>
</table>

2.2 Demand Management

Demand Management is a key element for the City in the delivery of sustainable and well managed water and sewerage services to its growing population. The City has a Demand Management Plan in place to efficiently manage water use and minimise water loss by:

- improving the City’s understanding and confidence in water supply and consumption data
- increasing knowledge of both average and peak demands
- reducing water leakage and loss
- better informing / educating customers
- transitioning to a new way of billing for water and sewerage charges, allowing customers to identify any significant increases in water usage (and potentially water leaks) much sooner
- reducing sewage flows and maximising efficient use of recycled water
- improving system performance through:
  - encouraging customer behaviour (such as saving water and not putting harmful items down drains and toilets) which will reduce the cost of infrastructure investment
  - reducing operational costs
  - cost reflective pricing
Improvements in water security within the region have now shifted the focus of demand management away from drought management and restriction regimes. The key drivers within the current Demand Management Plan are understanding customer demand, efficiency improvements and recognition of the economic benefit of deferring infrastructure expenditure.

The Demand Management Plan is based around the five foundation measures of Demand Management – education, encouragement, engineering, economics and enforcement. It identifies a range of performance measures and business improvements to contribute to the sustainable use of the region’s water resources and to improve the efficiency and effectiveness of existing infrastructure. The City promotes a range of demand management activities including:

- School and community educational programs to promote water efficiency
- Targeted customer notifications to support reductions in customer leakage
- Improved billing information to enable customers to read their meter, understand leakage and make informed decisions about their water use
- Moving towards a proactive approach of water network monitoring and leakage detection through an increased ‘Find and Fix’ capability to target and reduce water distribution network losses.

2.2.1 Examples of key initiatives implemented

The Schools Water Conservation Program and the Water Loss Reduction Program are examples of key initiatives implemented. Further detail is provided below on these two initiatives.

Schools Water Conservation Program

The objectives of the Schools Water Conservation Program are:

- Water conservation,
- Increased water literacy of school communities, and
- Encourage ongoing engagement with sustainable water management resources.

These objectives when met will benefit both schools and the wider community. Key actions included:

- smart logger installations at schools,
- visiting schools to complete a detailed survey and site tour,
- data analysis and benchmarking,
- delivery of a baseline report,
- collaborative engagement on water conservation opportunities, and

Key outcomes include greater focus on water conservation and lower costs for schools, increased water literacy, and immediate benefits though leak identification and reduction.

Water Loss Reduction Program

The City has progressed a number of key initiatives to drive a reduction in water losses, including:

- Utilising data analytics software to improve network visibility and efficiency, reducing costs and water losses, and improving customer service.
- Increasing the District Meter Area (DMA) coverage of the drinking water network from 35% to 70% to enable more targeted leak detection activities.
• Development of a proactive leak detection team to support the water loss reduction plan.

2.3 Sewerage network and treatment

The City’s sewerage network is divided into five sewerage catchment areas: Stapylton, Pimpama, Coombabah, Merrimac, and Elanora. A map of the catchments is shown in Appendix 4. The sewerage network includes sewage treatment plants (STP), pipes and sewage pump stations. A summary of the key components of the City’s sewerage network are outlined in Table 2.

Table 2: Key components of the City’s sewerage network (as at 30 June 2018)²

<table>
<thead>
<tr>
<th>Description</th>
<th>Water Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of mains (kilometres)</td>
<td>2,988km of sewer non-pressure pipes</td>
</tr>
<tr>
<td></td>
<td>405km sewer pressure pipes</td>
</tr>
<tr>
<td>Number of sewerage pump stations</td>
<td>526</td>
</tr>
<tr>
<td>Number of sewage treatment plants (STP)</td>
<td>4 (including the former Class A+ recycled water)</td>
</tr>
<tr>
<td>Number of maintenance holes</td>
<td>69,156</td>
</tr>
<tr>
<td>Sewerage connections</td>
<td>246,366</td>
</tr>
</tbody>
</table>

Sewage from the Stapylton sewerage catchment is currently treated at the Beenleigh STP under an agreement between Gold Coast and Logan City Councils.

Each of the STPs has environmental regulations associated with their operation which are outlined in their Development Approval (DA), issued under the Environmental Protection Act 1994. These operating conditions are regulated by the environmental regulator, currently known as the Department of Environment and Science (DES). Each year the City prepares a report to the environmental regulator summarising the performance of these systems.

2.4 Recycled water treatment, reuse and release

Recycled water is produced by treating sewage that comes into the City’s Sewage Treatment Plants to stringent health and environmental standards so it is suitable for particular uses. As at 30 June 2018, approximately 150 million litres² of sewage is produced each day on average from our toilets, showers, kitchens and laundries which is processed at our Sewage Treatment Plants.

The City’s primary objective for long term reuse is to provide a climate resilient, affordable, reliable and fit for purpose recycled water supply to meet our environmental regulatory requirements, maintain and enhance greenspace, and support and grow local industry to underpin the future of the City of Gold Coast.

The City currently has three recycled water supply systems:

• **The Northern Agricultural Scheme (Class C/D)**
  The northern agricultural scheme is currently supplied from Logan City Council’s Beenleigh Sewage Treatment Plant (STP), supplying cane farms with class C/D recycled water for irrigation purposes.

• **The Central Gold Coast Urban Scheme (Class A/B/C)**
  The Central Gold Coast Urban Scheme is currently supplied with class A recycled water from Pimpama STP (formerly class A+) and class B/C recycled water from Coombabah STP. The scheme supplies recycled water for the irrigation of golf courses and sporting facilities.

• **The Southern Gold Coast Urban Scheme (Class B/C)**
  The Southern Gold Coast Urban Scheme is supplied by the Merrimac and Elanora STPs and supplies class B/C recycled water to sporting facilities in the southern end of the Gold Coast.

---

² GCCC (2019) 2019-20 Ten Year Asset Management Plan: Sewage Collection, Treatment and Reuse Infrastructure
All reuse of recycled water is licensed by the Department of Health.

The key components of the recycled water network are summarised in Table 3.

### Table 3: Key components of the City’s recycled water assets (as at 30 June 2018)³

<table>
<thead>
<tr>
<th>Description</th>
<th>Water Assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of mains (kilometres)</td>
<td>117km recycled water pipes</td>
</tr>
<tr>
<td>Number of recycled water pump stations</td>
<td>7 (including those at the STPs)</td>
</tr>
</tbody>
</table>

There are currently 80 existing customers supplied with class C recycled water in the City of Gold Coast. Collectively, these customers have a recycled water demand of approximately 23.4 ML/d as specified below in Table 4. Almost 70% of existing demand is from golf courses and service water demand at the City of Gold Coast Sewage Treatment Plants (STP).

### Table 4 Existing recycled water customers by asset type ⁴

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>No. Customers [#]</th>
<th>Average Demand [ML/d]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sporting Facilities</td>
<td>18</td>
<td>1.1</td>
</tr>
<tr>
<td>Golf Courses</td>
<td>15</td>
<td>7.6</td>
</tr>
<tr>
<td>Pump Stations</td>
<td>13</td>
<td>0.5</td>
</tr>
<tr>
<td>Parks</td>
<td>5</td>
<td>0.2</td>
</tr>
<tr>
<td>Tanker Stations</td>
<td>9</td>
<td>0.4</td>
</tr>
<tr>
<td>Agriculture</td>
<td>4</td>
<td>0.8</td>
</tr>
<tr>
<td>Treatment Plants</td>
<td>3</td>
<td>9.1</td>
</tr>
<tr>
<td>Industrial</td>
<td>1</td>
<td>1.4</td>
</tr>
<tr>
<td>Schools</td>
<td>1</td>
<td>0.1</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>2.2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>80</td>
<td>23.4</td>
</tr>
</tbody>
</table>

Customers can find more information and can register their interest in accessing recycled water for commercial use via the City’s website.

Excess recycled water, which is not reused, which is treated to stringent health and environmental standards, is released into the ocean at the Seaway (Nerang River entrance) on each outgoing tide. Excess recycled water has been released into the ocean via the Seaway since the early 1980s and is licensed by the Department of Environment and Science (DES).

The performance of this system is monitored and reported to DES in accordance with strict operational performance criteria. These include location, timing, volume and quality of excess recycled water releases. We also participate in the regional ecosystem health monitoring program undertaken by independent Healthy Land and Water. The Broadwater achieved an environmental condition grade of A in the most recent Healthy Land and Water Report Card in 2018.

To cater for future growth requirements, the City’s Long Term Recycled Water Release Plan was developed to provide a sound, affordable long term solution for the City’s excess recycled water. Stage one consists of upgrades and augmentation of the pipelines at the existing Seaway release locations. This will ensure the current system is operating efficiently before proceeding to a staged off-shore solution.


3. **Service Areas and Connections**

3.1 **Service Areas - Water and Sewerage**

The City is required to provide water supply and sewerage services to customers within the identified water and sewer connection areas. In general:

- The water area covers those developed properties within both the urban areas and the rural residential zones of the city.
- The sewered area covers those developed properties within the urban areas of the city.

Water and sewerage services are currently also provided to a number of properties outside of the standard service area. Such properties may receive water supply, sewerage services, or a combination of both.

The standard of service provided to properties connected to the water supply system outside the standard service area may be below that which is provided to properties within the standard service area. This is because these properties have typically been connected via infrastructure that is not designed nor built to the City's standards and the City is not typically responsible for its maintenance.

The standard of service provided to properties connected to the sewerage system outside the standard service area is generally the same as that which is provided to properties within the standard service area. This is because these properties have generally been connected to the sewerage system via compliant infrastructure.

No further properties outside the water area can be connected to the water supply system without the express approval of the City. Should the City approve the connection of such properties, it must be in accordance with the SEQ Design and Construction Code for the planning, design and construction of water supply infrastructure.

Applications to connect to the sewerage system outside the sewered area will be considered on merit provided that the existing system has the available capacity and the applicant is able to connect to it by gravity in accordance with The City's standards.

Further details on the process and criteria for connections to (and disconnections from) the City’s water and sewerage network, both within and outside of the connection area, is available in the City’s Water and Sewerage Connections Policy and Procedure available on the City’s website.

3.2 **Service Areas - Non-drinking water (Pimpama Coomera)**

The two-supply system at Pimpama Coomera is currently considered part of the non-drinking water supply network. Non-drinking water is delivered through a two-supply reticulation water network that is coloured purple for easy identification. Non drinking water is used for approved non-residential uses and residential toilet flushing, irrigation and outdoor cleaning via dedicated purple taps.

In the future the non-drinking water supply network may be transferred to the drinking water supply network following relevant testing, compliance and approvals.

3.3 **Service Areas - Other recycled water**

The City operates a number of recycled water networks to supply non-residential and irrigation customers including golf courses and schools with recycled water. Access is considered on a case by case basis.

The City’s Recycled Water Master Plan identifies plans for the expansion of the recycled water network and the improvement of recycled water quality from class C to class A. The Master Plan will be implemented through the Recycled Water Network Expansion Project. This project includes the delivery of a recycled water treatment facility, 70km of new recycled water pipeline, recycled water reservoirs and pump stations. The Project aims to have the first new Class A customers connected in late 2019 and with the completion of all works by 2023.
New recycled water customer opportunities are initially focused on non-residential irrigation customers and cover the following customer types:

- public parks and open spaces
- sports clubs
- schools
- golf courses
- horticultural opportunities
- industrial customers (where opportunities arises)

Figure 3 demonstrates the potential types of recycled water uses, whilst Table 5 indicates that targeting parks, schools, sporting facilities and agriculture has the greatest potential for community benefit and recycled water demand.

Figure 3: Potential recycled water customers
### Table 5: Identified potential recycled water customers by asset type

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>No. Customers [#]</th>
<th>Average Demand [ML/d]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools</td>
<td>37</td>
<td>1.0</td>
</tr>
<tr>
<td>Parks</td>
<td>34</td>
<td>4.2</td>
</tr>
<tr>
<td>Sporting Facilities</td>
<td>23</td>
<td>1.1</td>
</tr>
<tr>
<td>Golf Courses</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Agriculture</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.8</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>101</strong></td>
<td><strong>10.1</strong></td>
</tr>
</tbody>
</table>

### 3.4 Connections Policy

The City’s Water and Sewerage Connections Policy Procedure provides information on the administrative, procedural and technical requirements for extensions, connections (including metering), disconnections and interference with the City’s water, sewerage and recycled water networks. It includes the current and future connection areas in the Gold Coast area. The City is committed to ensuring that connections, or extensions, to the water, sewerage and recycled water networks meet required standards, support population growth, and protect the health and safety of the community. The Water and Sewerage Network Connections Policy has been developed to assist developers, builders, plumbers and home owners to work with the City to deliver the best possible outcomes for all customers connecting to the networks.

The City’s Water and Sewerage Connections Policy and Procedure is available on the City’s website.

Information on whether a property is within Council’s current connections area is available on the City’s Property Enquiry mapping system, located on the City’s website.

For technical specifications around connections and plumbing and building works that interact with Council’s infrastructure, refer to Section 7.3 of the Land Development Guidelines, available on the City’s website.

### 4. Planning for Growth and Renewals

#### 4.1 Planning Drivers

Infrastructure and operational planning for the City’ water and sewerage operations occurs as a result of four key drivers. These drivers (in order of priority) are summarised in Table 6.

<table>
<thead>
<tr>
<th>Driver</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance (regulation, quality or standards)</td>
<td>Plans/programs/projects associated with meeting legislative or regulator obligations (e.g. safety, environment, quality).</td>
</tr>
<tr>
<td>Replacement (and/or)</td>
<td>Plans/programs/projects associated with replacing or renewing assets to</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth (capacity augmentation)</td>
<td>Plans/programs/projects associated with increasing the capacity of assets or construction of new assets, to meet growth in demand, or to provide additional service areas.</td>
</tr>
<tr>
<td>Improvement (enhanced services)</td>
<td>Plans/programs/projects associated with improving service levels, efficiency and reliability.</td>
</tr>
</tbody>
</table>

Regardless of the drivers, every business project is assessed on its individual merits (i.e. that the investment is prudent and efficient).

### 4.2 Compliance

To ensure the water supply and sewerage infrastructure can continue to comply with our responsibilities, a range of compliance related capital works projects are planned.

Information on compliance related capital works projects is available in the City’s Annual Plan available on the City’s website.

The City must carry out its water and sewerage infrastructure responsibilities in accordance with the requirements of (but not limited to) the following:

- *South-East Queensland Water (Distribution and Retail Restructuring) Act 2009*
- *Local Government Act 2009*
- *Local Government Regulation 2012*
- *Water Act 2000*
- *Water Supply (Safety and Reliability) Act 2008*
- *Petroleum and Gas (Production and Safety) Act 2004*
- *Environmental Protection Act 1994*
- *Environmental Protection (Water) Policy 2009*
- *Environment Protection and Biodiversity Conservation Act 1999*
- *Planning Act 2016*
- *Work Health and Safety Act 2011*
- relevant Council Local Laws

#### 4.2.1 Environmental obligations

The primary environmental legislation applying to the City’s water and sewerage operations is the *Environmental Protection Act 1994*, with environmental authorities (EA) issued under the Act by the Queensland environmental regulator, the DES. The City holds EA’s for the Environmentally Relevant Activities (ERAs) of operating STPs and sewage pump stations.

#### 4.2.2 Customer service obligations

The City’s Water and Sewerage Customer Service Standards and Charter has been developed to clearly state our service commitments to our customers and inform them of their rights as a water and sewerage customer of the City. The charter sets out a summary of our services, information on customer service processes, the shared rights and responsibilities of customers and the City, as well as our service standards and targets.

It applies to all customers who do not have a specific contract with the City for supply of water and sewerage services. Developers, trade waste and recycled water services customers are subject to individual contracts with the City.
4.2.3 Annual Performance Plan

The Annual Performance Plan – Gold Coast Water outlines the performance criteria of the City’s water and sewerage services. This document is prepared in accordance with the requirements of Section 104 of the Local Government Act 2009 and Section 175(1)(c) and (2) of the Local Government Regulation 2012.

The Annual Performance Plan - Gold Coast Water includes information on:

- Scope of the City’s water and sewerage service provisions
- Vision, values and governance
- Functions, purpose and activities
- Business Drivers, planning and projects
- Financial information
- Economic regulation and
- Performance reporting

The latest version of the Annual Performance Plan – Gold Coast Water can be found on the City’s website, as part of the City’s Annual Plan.

4.3 Renewals

To ensure the water and sewerage infrastructure can continue to meet water, recycled water and sewage treatment demand, a range of renewal (or replacement) related capital works projects are planned. Key inputs into the renewals program are derived from the City’s Asset Management Plans for water supply, sewerage and recycled water.

Condition assessment methods include a combination of modelled condition, performance history and field condition assessments. Approximately 94% of the water supply portfolio, and 93% the sewerage portfolio, is in a fair or better condition6 7.

Information on renewal related capital works projects is available in the City’s Annual Plan available on the City’s website.

4.4 Growth

4.4.1 Introduction

The Gold Coast is currently Australia’s sixth largest city, located within one of the country’s fastest growing regions. The City follows a rigorous planning process to ensure its water and sewerage infrastructure is designed and delivered to support community growth and services. Figure 4 outlines the structural and planning framework used by the City for the planning of water and sewerage services. A description of each of the main components of the planning framework and assumptions are contained in the following sections.

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7 GCCC (2019) 2019-20 Ten Year Asset Management Plan: Sewage Collection, Treatment and Reuse Infrastructure
4.4.2 Planning Assumptions

The planning assumptions state the assumptions about:

- population and employment growth; and
- the type, scale, location and timing of development, including the demand for each of the trunk water supply and sewerage infrastructure networks.

The planning assumptions together with the desired standards of service form the basis for the planning of the trunk infrastructure networks.

The Water Supply and Sewerage Infrastructure Plan 2019 Planning Assumptions report summarises the methodology used to develop the Population, Employment and Demand Conversion Model (commonly referred to as the Infrastructure Demand Model, IDM). The IDM converts planning information and growth projections...
data into resident population, visitor population (in accommodation), employment, non-residential gross floor area (GFA) and water supply and sewerage demands (Equivalent Persons EP and flows) at a lot level at each planning horizon.

These planning assumptions have not included any potential increase to density, development or employment opportunities due to the Gold Coast Light Rail Stage 3 project.

The planning assumptions used in the Water Supply and Sewerage Infrastructure Plan 2019 were informed by and are consistent with the following:

- **City Plan**
  The City Plan guides the growth and development of the City. The Water Supply and Sewerage Infrastructure Plan 2019 planning assumptions were informed by City Plan Version 4 and are consistent with the Gold Coast City Plan Version 7.

- **Queensland Government Statisticians Office (QGSO)**
  QGSO prepares population projections every 3 years. The Water Supply and Sewerage Infrastructure Plan 2019 planning assumptions used the medium series 2018 edition to guide the location and scale of population growth by SA2 for the Gold Coast.

- **SEQ Regional Plan - ShapingSEQ**
  ShapingSEQ is the Queensland Government's plan to guide the future of the South East Queensland region. The plan provides guidance for development in SEQ, and covers issues such as continued population growth, traffic congestion, housing affordability, climate change and employment generation. Regional planning assumptions for ShapingSEQ have been incorporated into the City's Planning Scheme. Of particular importance to the City and its water and sewerage operations are the population and housing projections and the designated urban footprint.

Further detail about the planning assumptions, including planning horizons, development categories, types, zones and land uses, population, tourism and employment growth and associated assumptions, can be found within the Water Supply and Sewerage Infrastructure Plan 2019 Volume 1 Report, available on the City's website once adopted.

### 4.4.3 Demand forecasting

Future water demand and sewage discharges are determined by a combination of both population and per capita demand (i.e. how much water is used per person and how much sewage is discharged per person). The City is responsible for ensuring that the water distribution network and sewage collection, treatment, reuse and discharge facilities will be adequate to meet future demands. This information is also provided to Seqwater who are responsible for ensuring that SEQ has enough water to meet the future demands of population growth and climate change.

The Gold Coast's future water demand is determined by the Population, Employment and Demand Conversion Model (commonly referred to as the Infrastructure Demand Model, IDM). This model converts planning information and growth projections data into water supply and sewerage demands (Equivalent Persons EP and flows) at a lot level. This water demand rates include residential water use, non-residential use (industry and business use) and non-revenue water (e.g. water which the City doesn’t receive payment for, such as firefighting etc.).

As demand for drinking water increases, the loading on our distribution network will also increase. This means water distribution capacity will need to be increased. The capacity of existing infrastructure, including distribution networks and treatment plants, is regularly assessed against the current and projected water demand and sewage discharges. This allows the City to identify when the infrastructure will approach its capacity and will require upgrading. Upgrades are initially identified in the Water Supply and Sewerage Infrastructure Plan and the requirements and timing are further refined during concept and detailed planning.
To ensure the water and sewerage infrastructure can meet predicted future water, recycled water and sewage treatment demand, a range of growth related capital works projects are planned.

Information on growth related capital works projects is available in the City’s Annual Plan and Water Supply and Sewerage Infrastructure Plan 2019 Volume 1 available on the City’s website.

4.4.4 Water Supply and Sewerage Infrastructure Plan

The purpose of the Water Supply and Sewerage Infrastructure Plan 2019 is to:

- integrate water supply and sewerage infrastructure planning with the land use planning identified in the planning scheme;
- provide transparency regarding the City’s intentions for the provision of water supply and sewerage trunk infrastructure;
- enable the City to estimate the cost of future water supply and sewerage infrastructure provision to assist its long term financial planning;
- ensure that water supply and sewerage trunk infrastructure is planned and provided in an efficient and orderly manner; and
- provide a basis for the imposition of conditions about infrastructure on development approvals.

The Water Supply and Sewerage Infrastructure Plan 2019 was developed to support the City Plan Version 4 (but is consistent with City Plan Version 7) and is intended to be incorporated into subsequent versions of the City’s Water Netserv Plan (this document), Southport Development Charges and Offset Plan (DCOP) and the Local Government Infrastructure Plan (LGIP).

As such, the development of the Water Supply and Sewerage Infrastructure Plan 2019 was consistent with the requirements of the LGIP, and follows the framework (and provides the required information) for an LGIP included in the Minister’s Guidelines and Rules under the Planning Act 2016 (DILGP, July 2017).

The Water Supply and Sewerage Infrastructure Plan 2019 Planning Assumptions covers all of the Gold Coast City Council local government area. Water and sewerage infrastructure planning extends to the future water and sewer connection areas, respectively.

Appendix 3 and 4 of the Water Supply and Sewerage Infrastructure Plan 2019 identify the proposed trunk upgrades and extensions due to growth within the future connection areas.

4.4.5 SEQ Design and Construction Code

The South-East Queensland Water (Distribution and Retail Restructuring) Act 2009 requires SEQ water service providers to produce a single standard of service relating to the design and construction of water and sewerage infrastructure in the region from July 2013. In accordance with the Planning Act 2016, the SEQ Water Supply and Sewerage Design and Construction Code (SEQ WS&S D&C Code) will prevail over any existing provisions within the City’s planning scheme that specify water and sewage service infrastructure outcomes.

Whilst the City’s water supply and sewerage desired standards of service (DSS) for all new and augmented trunk water supply and sewerage infrastructure generally aligns with the standards of the SEQ WS&S D&C Code. It is not generally intended that existing water supply and sewerage infrastructure will be upgraded to meet the standards for new infrastructure in cases where the DSS for new infrastructure are at a higher level than that of past DSS, given that existing infrastructure was planned, designed and constructed in the past, to the standards applicable at the time.
4.5 Improvements

Improvement projects are most often related to risk reduction (e.g. safety improvement), efficiency (e.g. energy reduction), and increase in service levels.

Information on improvement related capital works projects is available in the City's Annual Plan available on the City’s website.

5. Charges

5.1 Introduction

To cover the cost of providing water, sewerage and recycled water services, charges are applied. These charges allow the City to maintain the current systems and invest in infrastructure required for the future. Charges are designed to reflect costs and are based on the ‘user pays principle’. The City is responsible for setting charges for water, sewerage and recycled water services on an annual basis.

There are many factors which impact pricing including:

- the tariff structure (i.e. how costs are distributed across customers)
- the extent of Community returns paid to the Council of the City of the Gold Coast
- depreciation/asset consumption
- community service obligations
- taxation
- contributed assets (where applicable)

Charges include residential and non-residential water, sewerage (including trade waste) and recycled water charges. For new connections, outside of the City's connection area, charges include a network access charge and a connection charge. For areas within the City's connection areas charges include a connection charge and infrastructure charges (which may include a credit or an offset for existing lawful use rights or for trunk infrastructure provided).

Details of all current charges are available on the City’s website in the ‘Revenue Statement and Resolution of Rates and Charges’ document for the relevant financial year.

5.2 Residential charges

The City’s residential water and sewerage charges comprise four components:

- water access charge (for ongoing connection to the City’s water distribution system)
- water usage charge
- sewerage access charge (for ongoing connection to the City’s sewerage system)
- non-drinking water usage charge (if applicable).
The water access charge is a fixed daily amount for having access, or the ability to access, the City’s water distribution system, regardless of whether or not water is being used at the property. The water access charge contributes to the ongoing maintenance of water supply network, including water mains, reservoir, pumping stations and meters, to ensure a high-quality and reliable supply of water.

The water usage charge is a variable amount, based on actual water used, as measured by the property’s water meter. It is charged per kilolitre (1000 litres) of water used. The water usage charge is made up of two parts; the cost of purchasing bulk water from the State Government (State Bulk Water charge); and the City’s cost of delivery to customers. The variable costs reflect things such as chemicals and electricity.

The sewerage access charge is a fixed daily amount for each residential property’s connection, or ability to connect, to the City’s sewerage transportation and treatment system, regardless of whether or not sewage is being discharged. The sewerage access charge assumes a fixed level of sewage discharge for residential properties (a separate sewerage volumetric charge does not apply). This is an administratively simple and cost effective approach. The sewerage access charge contributes to the ongoing maintenance of the sewerage network including sewer mains, treatment plants, pumping stations and emergency relief structures, to ensure the reliable transport of sewage from our customers to a treatment plant for treatment and release.

The non-drinking water usage charge is currently relevant only to properties in some areas of Pimpama-Coomera that are connected to the non-drinking water system. As with the water usage charge, this is charged per kilolitre (1000 litres) of non-drinking water used and is based on the reading from the property’s non-drinking (previously Class A+ recycled) water meter.

5.3 Non-residential charges

Non-residential charges for businesses and industry are similar to residential charges but are comprised of six components.

- Water access charge (as for residential charges with an adjustment made for the meter size).
- Water usage charge (as for residential charges).
- Sewerage access charge (as for residential charges).
- Sewerage volumetric and load charge (based on a percentage of the water consumption volumetric charge, and risk and quality of sewage discharges - these both vary with industry type). For more information, visit goldcoast.qld.gov.au/documents/bf/nonresidential-sewage-industry-type-discharge-factors-definitions.pdf.
- Non-drinking water usage charge (if applicable)
- Recycled water usage charge (if applicable).

For non-residential properties the water access charge will be based on the cross sectional area of water services/s supplying the property or premises. A reduction factor based on the water usage for the whole of the previous year will be applied to the water access charge. However, where a water service is greater than 32mm in diameter, the minimum water access charge will be the water access charge applicable for a 40mm water service.

In addition to the charges for residential customers, for non-residential properties (e.g. commercial and industrial properties) a volumetric and load based sewerage charge is also applied. This recognises that non-residential properties may have highly variable sewage discharges and are thus charged on the user pays principle.

The sewerage volumetric charge is a charge per kilolitre (1000 litres) of sewage discharged and is based on the reading from the property’s water meter, multiplied by a discharge factor applicable to the type of commercial or industrial activity.

Full details of Council’s trade waste management system and charges are available on the City’s website.

Class C and Class A recycled water is used for a range of non-residential uses such as dust suppression, golf course and sporting field irrigation. As with the water usage charge, this is charged per kilolitre (1000 litres) of
recycled water used and is based on the reading from the property's recycled water meter. This charge is relevant only to properties subject to individual supply agreements.

5.4 Infrastructure charges

Infrastructure charges are applied to new developments or developments that change the use of the land. These charges help to pay for the infrastructure required to meet the additional demand that the new development places on the water supply and sewerage networks. In general, water supply and sewerage networks are constructed prior to land development occurring. Infrastructure charges are collected to help pay the cost of the new infrastructure investment over time. There are three different charging regimes in recent years that may apply to existing approved developments, as outlined below.

Historically the City levied charges for the water and sewerage networks under Planning Scheme Policies 3A & 3B or the PIP.

On 1 July 2011, the Queensland Government set new maximum (fixed) adopted trunk infrastructure charges for residential and non-residential development. Under this regime, Councils are able to pass their own adopted infrastructure charges resolution. This allows Councils to adopt the maximum or less than the maximum State Government charge. City of Gold Coast’s Adopted Infrastructure Charges Resolution (AICR) commenced on 1 July 2011.

The current and most recent infrastructure charges regime is the Council of the City of Gold Coast Charges Resolution. The first version of the Council of the City of Gold Coast Charges Resolution (No 1 of 2015) (Charges Resolution) took effect from 1 July 2015 following its adoption by Council on 16 June 2015. The Charges Resolution details how and when infrastructure charges will be applied to development within the Gold Coast. Subsequent amendments to the Charges Resolution have created a number of different versions. The applicable version to use will depend on when a development is approved.

Details on infrastructure charges can be found on the City’s website.

5.5 General fees and charges

In addition to water supply and sewerage services, the City's water and sewerage operations also provide a number of additional services directly to customers, including connection and disconnection to services.

The City is responsible for recommending appropriate general fees and charges for such services to the City. Where there are monopoly services, the basis for price setting will be full cost recovery. Where the services are provided into a competitive market, prices will be set having regard to the sustainability of the business activity and the market price for the services.

The City is entitled to charge compensation for third party damage to water and sewage infrastructure.

Details of all current charges are available on the City’s website in the ‘Register of fees and charges’ document for the relevant financial year.
## Appendix 1 Structure of the City of Gold Coast’s Water Netserv Plan

<table>
<thead>
<tr>
<th>Water netserv plan requirement (Part A)</th>
<th>Relevant section within the City of Gold Coast water netserv plan (Part A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) state the relevant planning assumptions on which the plan is based</td>
<td>Section 4.4.2 of this Plan outlines the planning assumptions the City’s water and sewerage operations currently bases its planning on.</td>
</tr>
<tr>
<td></td>
<td>Detail is available in Section 2 of the Water Supply and Sewerage Infrastructure Plan 2019 Volume 1 Report</td>
</tr>
<tr>
<td>b) include information outlining the SEQ service provider’s infrastructure networks for its water service and sewage service, including information about the capacity of each network to service existing and proposed customers</td>
<td>Section 2 provides information on the City’s current water, sewerage and recycled water assets. Section 4 provides information on proposed assets. The capacity of each network to service existing and future growth is detailed in the Water Supply and Sewerage Infrastructure Plan 2019 Volume 1 Report.</td>
</tr>
<tr>
<td>(c) include information outlining any proposed increases in the capacity of the infrastructure networks, including information about the areas into which the networks are to be extended and time frames for increasing the capacity. (These areas into which infrastructure networks are to be extended must be consistent with the priority infrastructure areas of the local government area).</td>
<td>A detailed description of increases to infrastructure capacity to meet long-term planning needs is available in the Water Supply and Sewerage Infrastructure Plan Volume 1 Report. Section 4 provides details of the growth related infrastructure. Further detail can be found in the City's Annual Plan.</td>
</tr>
<tr>
<td>d) state the desired standard of service for infrastructure used to provide the SEQ service provider’s water service and sewage service</td>
<td>Section 4.2 and 4.3 of the Water Supply and Sewerage Infrastructure Plan 2019 describes the Desired Standards of Service (DSS) on which the Plan was formed. Section 4.4.5 gives an overview of the SEQ Design and Construction Code.</td>
</tr>
<tr>
<td>(e) include information outlining the SEQ service provider’s strategy for demand management for water</td>
<td>Section 2.2 provides an overview of the City's Demand Management Plan for water and its associated drivers and activities.</td>
</tr>
<tr>
<td>(f) state the SEQ service provider’s policy for connections to its infrastructure networks for its water service and sewage service (the connections policy), including:</td>
<td>The City's Water and Sewerage Connections Policy and Procedure covers all aspects of connections to the City's water and sewerage services. An outline of what is contained in the Water and Sewerage Connections Policy and Procedure can be found in section 3.4</td>
</tr>
<tr>
<td>(i) the areas (each a connection area) in which the SEQ service provider guarantees to provide connection to its water service or sewage service;</td>
<td>For further technical specification for connections and plumbing and drainage works please refer to section 7.3 of the Land Development Guidelines. These guidelines are intended for plumbers, developers and builders who are undertaking works within the Council area.</td>
</tr>
<tr>
<td>(ii) The areas (each a future connection area) in which the SEQ service provider intends to extend its infrastructure network;</td>
<td></td>
</tr>
<tr>
<td>(iii) the circumstances in which the SEQ service provider may approve connection outside a connection area; and</td>
<td></td>
</tr>
<tr>
<td>(iv) the SEQ service provider’s criteria for providing connection, with or without conditions,</td>
<td></td>
</tr>
</tbody>
</table>
(g) include a schedule (a charges schedule) containing details of -

1. charges, including charges under section 99AV(2)(b)- fixed access charge- to connect customers to the SEQ service provider’s water service and sewage service;
2. charges for a customer’s use of the services; and
3. charges relating to providing infrastructure for the services.

Section 5 provides an overview of the financial environment in which the City’s water and sewerage operations operates, the different types of charges and the documents containing the latest schedule of charges.

(h) indicate how the SEQ service provider proposes to achieve effective outcomes for the provision of water services and sewage services in -

1. the SEQ service provider’s relevant area;
2. the SEQ region.

How the City proposes to achieve effective outcomes for the provision of water, sewerage and recycled water services are contained within the City’s Water and Sewerage Customer Service Standards and Charter and the Annual Performance Plan – Gold Coast Water. An overview of these documents are available in section 4.2.2 and 4.2.3.
Appendix 2 Our role in delivering water to the Gold Coast
Appendix 3 Gold Coast water supply catchments
Appendix 4 Gold Coast sewerage catchments

[Map of Gold Coast sewerage catchments]

Legend:
- Major Road
- Coomabah
- Elanora
- Merrimac
- Pimpama
- Stanlyton
- GCCC Boundary

SEWERAGE CATCHMENTS

Produced By: Water and Waste
Production Date: 11 Nov 2019
Service Catalogue: 5019/7272 2019
Projection: MGA94 Zone 56

Disclaimer: This map of the City of Gold Coast Water and Waste is provided as a guide only and is not intended to be used for any legal or other purposes. The City of Gold Coast does not accept any responsibility for any errors, omissions, inaccuracies or for any reliance on the information contained herein.