Annexure 3 - Demand Forecast

QCA Price Monitoring Investigation – Part 2 Submission

Public Release

This Annexure is a key component, and forms part of, the overall Urban Utilities' Part 2 Submission to the Queensland Competition Authority's (QCA) price monitoring investigation for the period 1 July 2026 to 30 June 2030. The Urban Utilities' Part 2 Submission should be read as a whole and, because of the interrelated nature of the subject matter, no part should be read in isolation or taken out of context.

The Executive Narrative provides a summary of the entire Urban Utilities' Part 2 Submission, and this Annexure should be read in conjunction with that narrative.

Amongst other items, the Executive Narrative outlines how this technical Annexure, along with the other Annexures provided with the Part 2 Submission, specifically addresses different elements of the Part 2 Stated Matters of the QCA investigation covering the period FY28–30 (1 July 2027 to 30 June 2030).

Contents

1 Executive Summary

Urban Utilities has prepared this demand forecast annexure to support the QCA price monitoring submission, including the assessment of capital expenditure, operating expenditure and pricing.

The infrastructure planning demand forecast provides the foundation for capital planning and the forecasts provided to Seqwater. Forecast demand is also relevant to operating expenditure planning where demand is used as a cost driver.

Demand forecasting is a critical input to Urban Utilities' long-term planning because customer growth is now occurring at a scale and pace that is materially changing the operating environment of the business. Growth is progressively consuming the available capacity that has historically allowed Urban Utilities to accommodate population growth without substantial new infrastructure investment. At the same time, increasing loads are emerging across wastewater treatment plants, transfer systems, pump stations, storages and distribution networks, reducing operational flexibility and bringing forward the need for capacity augmentation.

The infrastructure planning demand forecasts are developed from a long-term perspective. Using Urban Utilities' Demand Modeller and Tracking Tool (DMaTT), individual land parcels are assessed for their ultimate development potential and forecast development sequencing. These forecasts are then converted into water demand and sewer load projections that are used to assess system capacity and identify future infrastructure needs. The resulting forecasts underpin Urban Utilities' capital planning processes, operating expenditure planning and forecasts provided to Seqwater under the SEQ Water Security Program.

Urban Utilities services one of Australia's fastest-growing regions. Forecasts indicate continued population, dwelling and non-residential growth across the service area over coming decades, with particularly strong growth occurring in western and peri-urban growth corridors. This growth is increasingly concentrated in locations that are more complex and costly to service and where available infrastructure capacity is being consumed most rapidly. In several catchments, growth-related capacity constraints are already emerging and investment lead times mean action must occur years before physical limits are reached.

Urban Utilities forecast indicates that water serviced dwellings are expected to increase from approximately 714,000 in 2025-26 to 953,000 by 2045-46. Sewer serviced dwellings are forecast to increase from approximately 689,000 to more than 923,000 over the same period. Serviced population growth is expected to continue well beyond the price monitoring period, driving sustained increases in water demand, wastewater generation and infrastructure loading.

Importantly, these forecasts represent more than additional customer numbers. They translate directly into increased demand on treatment plants, trunk networks, pump stations, reservoirs and critical service infrastructure. Across parts of the network, forecast growth is occurring at the same time as assets are ageing, environmental regulation is increasing and operating margins are reducing. As a result, the business is increasingly required to invest simply to maintain existing levels of service, reliability and compliance while continuing to support growth.

The annexure also sets out the demand forecasting approach used for pricing, based on the same underlying growth assumptions. The pricing forecasts are calibrated to observed customer behaviour, billing data and recent demand trends to estimate the chargeable quantities used in revenue forecasting and price setting.

In comparison the infrastructure demand forecast is different as it includes capacity for non-revenue water and is calibrated using longer time series data to project over a much longer infrastructure planning horizon.

The dual approach to infrastructure demand forecasts and pricing demand forecasts is set out below in summary form, with the body of this annexure providing a detailed explanation. The impact of growth on the network is fully described in the capital expenditure annexure.

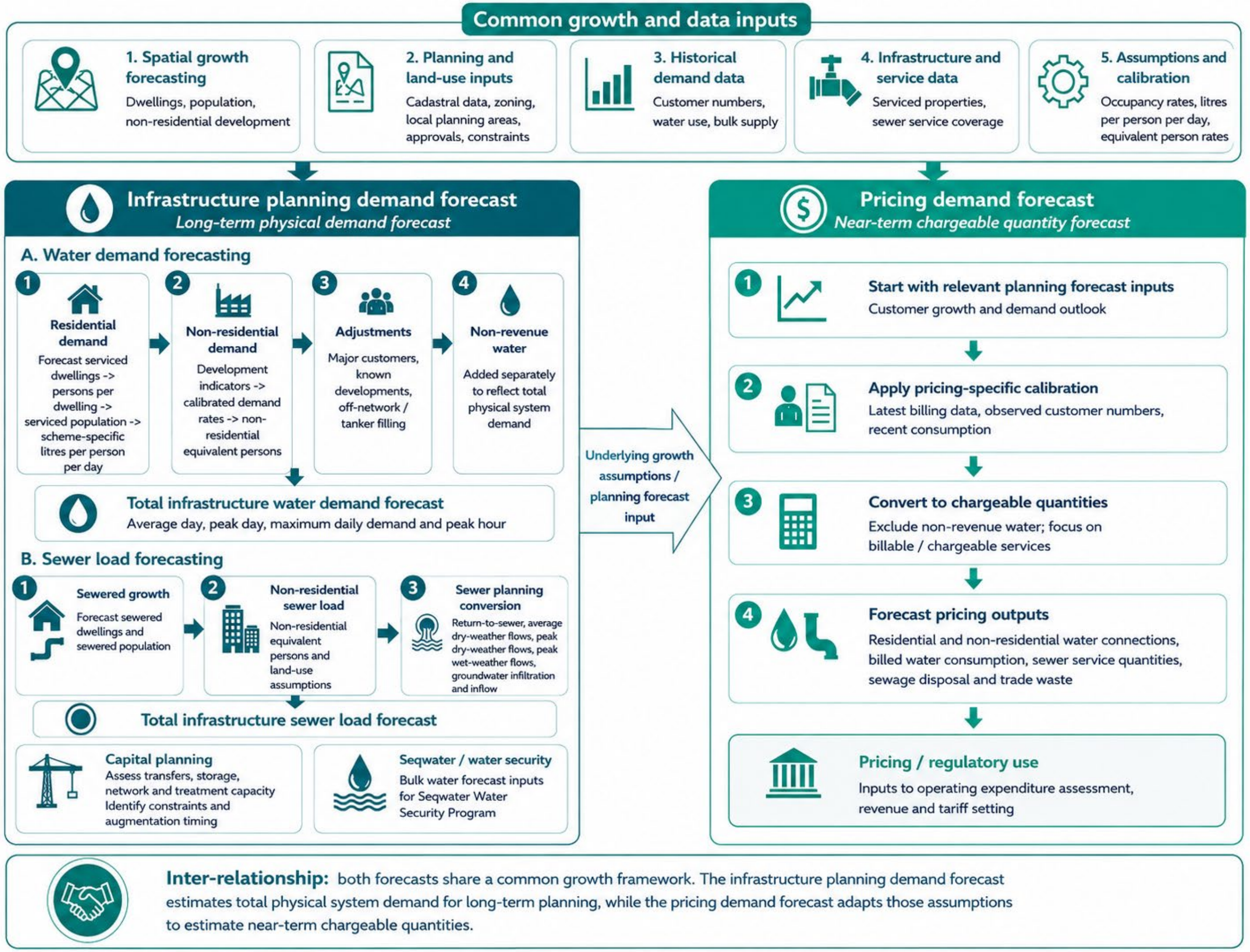


Figure 1-1 *Summary of demand forecasting approach*

2 Purpose, Scope and Regulatory Context

Urban Utilities has prepared this demand forecast to support its infrastructure planning, which flows through to numerous items in its pricing submission for the price monitoring period to 30th June 2030 (such as capital expenditure, operations and maintenance costs, the revenue requirement and ultimately pricing).

The primary long-term forecast described in this annexure is the infrastructure planning demand forecast. This forecast estimates for each land parcel the physical water and sewerage loads that Urban Utilities' infrastructure must be capable of servicing over time. It is used to assess network, transfer, storage and treatment capacity, identify future capacity constraints and inform the timing and scale of capital investment, including when trunk infrastructure extensions are required to provide support to greenfield developments. The purpose of the infrastructure planning demand forecast is to ensure Urban Utilities is investing appropriately in capacity, in the correct places, at the correct time, in line with expected development activity.

The infrastructure planning demand forecast provides the foundation for capital planning, operating expenditure planning and the forecasts provided to Seqwater under the SEQ Bulk Water Supply Code and SEQ Water Security Program.

The pricing demand forecast is derived from the same underlying growth assumptions but is adjusted for pricing purposes. It focuses on chargeable quantities used in the pricing model, including billed water consumption, service charge quantities, sewage disposal volumes, trade waste volumes and other billing determinants.

These adjustments reflect the different purpose of the pricing forecast. In particular, the pricing forecast uses recent billing data, observed customer numbers and recent consumption trends, and excludes non-revenue water that is relevant to infrastructure planning but not directly charged to customers. The purpose of the pricing demand forecasting is to ensure appropriate prices, and cost recovery.

The forecasts are therefore consistent in their underlying growth assumptions, while differing where necessary to satisfy the independent utility requirements of setting a basis for prudent long-term infrastructure capacity planning and short-term pricing cost recovery.

2.1 Regulatory and Referral Requirements

The QCA referral notice requires forecast demand to be considered in assessing both operating expenditure and capital expenditure. The referral defines Maximum Allowable Revenue as including the prudent and efficient costs of carrying on the monopoly business activities, including operating and capital expenditure assessed using normal operating conditions and forecast demand.

For the purposes of the referral, forecast demand is to be provided by Urban Utilities for normal operating conditions and must be consistent with Urban Utilities' contribution to the SEQ Water Security Program.

This annexure explains the demand forecasts by first describing the long-term infrastructure planning demand forecast used to assess physical water demand, sewer load and infrastructure capacity. It then describes how pricing for demand is developed using the infrastructure planning demand forecast as an input.

2.2 Urban Utilities' Infrastructure Planning Context

Urban Utilities' demand forecasting approach reflects the supply of water distribution and wastewater collection and treatment services to a large and diverse population of residential and non-residential customers distributed across numerous suburbs, catchments and subnetworks. The demand associated with any individual customer represents a small proportion of total system demand. Consequently, changes affecting individual customers tend to have a more limited effect on aggregate demand than they would for a supplier whose demand is concentrated among a small number of large customers.

For Urban Utilities, the principal forecasting uncertainty concerns where and when local population and development growth will translate into additional connections and local water and wastewater works. Growth occurring through a different local development sequence of land subdivision or land redevelopment than forecast can change the location and timing of infrastructure constraints even where aggregate regional demand remains broadly consistent with forecast. Urban Utilities' forecasting and risk-management approach therefore places particular emphasis on parcel-level development forecasts, the monitoring of actual connection and development activity, regular forecast refreshes, local capacity assessment and gated infrastructure decisions that check that validity of planning assumptions.

3 Forecasting Approach for Capital Infrastructure

Urban Utilities' infrastructure demand forecasts are used to determine future service requirements, identify capacity constraints and inform the timing and scale of capital investment.

The forecasts support infrastructure planning by comparing forecast service loads for each land parcel against local street and trunk infrastructure capacity to identify future capacity deficits. In contrast to pricing forecast outcomes, utility network infrastructure capacity planning outcomes are set by which specific parcels, streets and suburbs are forecast to develop, in which sequence, with what road/infrastructure pathway corridor layouts and at what distance from existing infrastructure.

The two forecasts differ slightly in that the pricing forecast is adjusted annually to align with the latest connected customer counts in Urban Utilities billing system, resulting in a lower property connection count. The more conservative infrastructure demand forecasts are managed through routine updates to forecast datasets and investment decisions being subjected to gate-based scrutiny through the Gateway Decision Process – Infrastructure Capital Works (PRO370) which incorporates assurance of demand forecast vs actual measured flows and latest development activity trends.

Urban Utilities' infrastructure capacity requirements are primarily set by peak demand conditions rather than annual water usage volumes. These are Firefighting, Peak Hour and Peak Day(s) conditions for the water distribution network, and Peak Dry Weather Flow and Peak Wet Weather Flow conditions for the sewerage collection and treatment systems.

The core growth input is the Demand Modeller and Tracking Tool (DMaTT). DMaTT produces parcel-level forecasts of future dwellings, resident persons and base non-residential water loads. It uses cadastral data, billing records, existing land use, planning zones, Local Planning Areas, development constraints, development approvals, Priority Development Areas / State Development Areas, and broader population-growth projections. Land use planning authority policies for desired water and sewerage outcomes are applied to determine which subset of parcels are likely to be conditioned for water supply or sewerage network connections, and which subset of parcels are likely to instead install private on-site systems.

These inputs are used to calculate the ultimate development potential of each parcel and then sequence that growth over time using land use and development/building history data to infer which parcels of land developers will prioritise first. The approach for water demand and sewer load is set out below.

4 Water Demand Forecasting

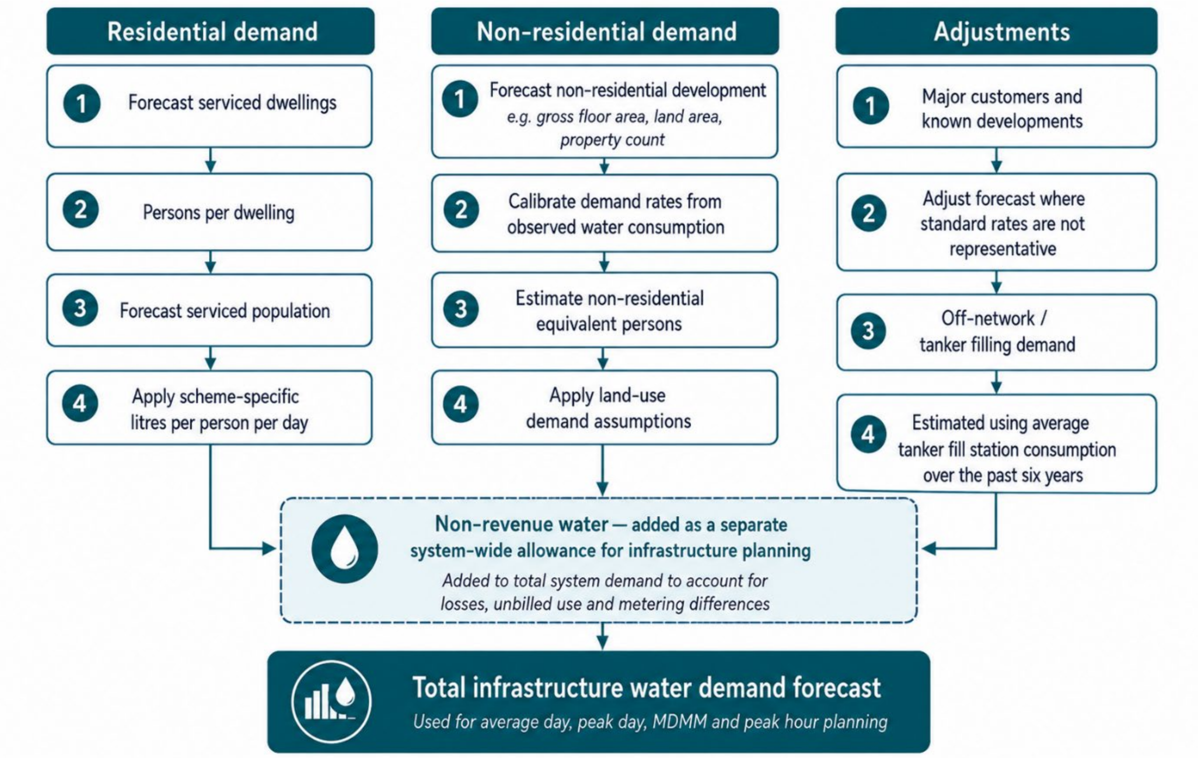
Residential water demand for infrastructure planning is forecast by combining forecast serviced dwellings, forecast persons per dwelling and scheme-specific litres per person per day assumptions.

Non-residential water demand is forecast using land-use and development load indicators, such as gross floor area, developable land area, property hectarage or property count, with demand rates calibrated from observed water consumption data and expressed as non-residential equivalent persons.

Where standard land-use demand rates are unlikely to reflect future demand, adjustments may be made for major customers, known developments or off-network demands. Off-network and tanker filling demand is forecast using average tanker fill station consumption over the past six years.

The approach is summarised in Figure 4-1 and then described in more detail below.

***Figure 4-1** Summary of water demand forecasting for Infrastructure Planning*



4.1.1 Property Count Methodology

A property count is undertaken to estimate the current and forecast number of serviced residential and non-residential parcels. The starting basis of the forecast is to estimate the number of residential and non-residential properties that existed in the baseline year for different land use types.

Property parcels are classified by their land use and location as to whether their development will likely connect to reticulated water supply or sewerage. Each land parcel has a future development profile forecast with principal consideration of:

- The existing land use, dwellings, resident persons and water use;
- Town planning overlays such as local government/state zonings and the possible future ultimate development yield;
- State and local government dwelling and population forecasts; and
- Recent development activity trends inferencing the likely market demand for parcel development for determining which parcels will develop earlier and which parcels will develop later.

Urban Utilities uses DMaTT to forecast property counts and sequence growth over time. DMaTT integrates spatial, planning and development information to estimate the ultimate development potential of each land parcel and phase that growth over the forecast period.

The model begins with a baseline of current development mapped against cadastral data. This includes existing dwellings and land-use information at the parcel level.

Land use zoning and constraints defined by local and state governments are then incorporated to identify allowable land uses and development densities. These determine the potential development yield for each parcel. Local Planning Areas may override standard assumptions where more specific planning information applies, such as developer master plans, Priority Development Area land use planning or State Development Area land use planning.

Development constraints are also spatially mapped and applied to each parcel. These include flooding overlays, landslide risks, easements and other buffer areas where development may be restricted or prohibited. Applying these constraints reduces theoretical development potential so that the forecast better reflects real-world limitations.

DMaTT also allows constraints to be overridden where more current or specific information is available. This may occur through approved Development Applications or designated State Development Areas, which provide known development scales or timing that take precedence over general planning assumptions.

Using these inputs, DMaTT calculates the maximum feasible development potential, referred to as the "ultimate" development capacity of each parcel. This reflects planning controls, development constraints and approved exceptions.

The model then sequences development over time by considering the relative likelihood and desirability of development on each parcel. For example, parcels with approved development applications are rated as more likely to develop in the near term than parcels without approvals. These factors help prioritise parcels within the growth sequence.

Broader residential and non-residential growth projections are also applied as development targets. DMaTT uses these targets, together with parcel-level desirability scores, to phase development in a way that is consistent with planning expectations and market conditions.

These growth projections are translated into forecast serviced resident persons and forecast non-residential water usage. Resident persons are derived through expected dwelling occupancy rates per dwelling type using statistical area data for existing housing stock as the baseline. Forecast non-residential parcel loads are expressed in "Equivalent Persons" or "EP" to facilitate easier communication of the relativity of non-residential water cycle loads to the residential property sector.

The result is a phased property count forecast that aggregates parcel-level development estimates over time. The current forecasts are set out below, by council area:

Table 4-1 Forecast water serviced dwellings by council area, 2025-26 to 2045-46

Region	2025-26	2030-31	2035-36	2040-41	2045-46
Brisbane	574,282	601,319	632,635	669,517	701,632
Ipswich	112,242	140,516	163,595	187,790	209,956
Lockyer Valley	12,768	14,187	15,563	16,850	18,172
Scenic Rim	8,494	9,689	10,873	12,010	13,146
Somerset	6,445	7,384	8,262	9,187	10,046
Total	**714,231**	**773,095**	**830,928**	**895,354**	**952,952**

The forecast serviced dwellings are multiplied by expected resident population occupancy rates per dwelling type and per area to determine the expected total resident serviced persons.

4.2 Resident Persons

4.2.1 Residential Water Demand

Per-capita water use is based on historical water use, using a six-year average usage history for observed residential usage per person. This longer period is appropriate for infrastructure planning because it smooths short-term volatility and avoids basing long range infrastructure decisions on single years influenced by short-term weather or socio-economic influences.

The current residential Litres per Person per Day (LPD) assumptions vary materially by water supply scheme. Assumed future residential water use ranges from 129 LPD for Linville to 207 L/person/day for Kooralbyn. The main urban schemes are assumed at 171 LPD for Brisbane and 161 LPD for Ipswich respectively.

Table 4-2 Residential water use assumptions by water supply scheme

Water supply scheme	Litres per person per day
Beaudesert	154
Boonah-Kalbar-Aratula-Mt Alford	156
Brisbane	171
Canungra	142
Esk-Toogoolawah	155
Ipswich	161
Jimna	162
Kilcoy	181
Kooralbyn	207

Water supply scheme	Litres per person per day
Linville	129
Lockyer Valley	131
Lowood	161
Peak Crossing-Harrisville-Warrill View	172
Rathdowney	156
Somerset Dam	157

Persons per household are derived from Census-based occupancy rates. Urban Utilities calculates occupancy rates for detached and attached dwellings within defined occupancy areas. These areas are based on SA2 geographies for Brisbane and Ipswich and grouped SA1 geographies for the regional council areas. The occupancy rates are applied to forecast attached and detached dwellings in DMaTT to estimate future residential population.

These occupancy assumptions are combined with LPD assumptions to determine forecast residential demand.

4.3 Non-Residential Demand Assumptions

Non-residential water demand assumptions are developed using water meter volume data from existing non-residential properties serviced by Urban Utilities. The consumption data is grouped by land-use category so that different types of non-residential development can be assigned different demand rates. These demand rates are expressed as non-residential equivalent persons per development unit and are applied to forecast non-residential growth using the relevant development measure, such as gross floor area, developable land area, property hectarage or property count.

This approach allows the forecast to reflect observed water use patterns rather than relying only on broad land-area assumptions. It is particularly important for infrastructure planning because non-residential demand can vary significantly between customers and land uses. Most non-residential properties have relatively low or moderate demand, while a small number of large users can have very high demand. These high-use customers can distort simple averages, so Urban Utilities uses calibrated land-use demand rates and statistical methods to develop more representative non-residential demand assumptions.

The calibration process recognises that non-residential water demand is often positively skewed and does not follow a simple normal distribution. For this reason, the model tests statistical distributions for each land-use category and applies fallback methods where the available data is limited or where no suitable statistical fit is identified. For example, the 80th percentile may be used where it provides a more appropriate planning assumption than a simple average.

The resulting demand parameters are typically expressed as equivalent persons per 100 square metres of gross floor area or developable land area, depending on the characteristics of the land-use category. Where property count, property hectarage or another development measure better reflects the relevant land use, that measure may be used instead.

4.4 Major Customer and Bespoke Demand Adjustments

Major customer and development-specific demand assumptions are incorporated where they are material to the infrastructure forecast and where reliable information is available. This recognises that some non-residential customers or development areas may have demand profiles that are not well represented by standard land-use demand rates or average historical consumption patterns.

Where customer-specific or development-specific information is available, Urban Utilities may adjust the forecast to reflect expected changes in future demand. These adjustments may relate to changes in development trajectory, land use, facility operations, production activity, development staging or other operational information that is expected to materially affect future water use.

4.5 Non-Revenue Water

An allowance for Non-Revenue Water (NRW) in the forecast has been made by comparing historical bulk water supply volumes with the historical property metered consumption for the last 6 years, and the average value per NRW in Litres per EP per day has been applied to the forward forecast.

This forecast is calibrated to provide the balance of bulk water required over and above the forecast supply to customer properties and facilities.

4.6 Forecast Total Water Supply Demand

The infrastructure water demand forecast shows total water supply demand increasing over time.

Table 4-3 *Forecast total water supply demand by component, 2023-24 to 2029-30*

Demand component	Average Daily Demand (Million Litres per Day)						
	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
Residential demand	278	284	290	295	299	304	308
Non-residential demand	115	116	117	119	120	121	122
Non-revenue water	37	38	38	39	39	39	40
Total water supply demand	**430**	**438**	**445**	**452**	**458**	**464**	**470**

4.7 Application for infrastructure planning

The forecast is then converted into infrastructure planning measures. Average day demand provides a baseline measure of long-term system demand and is used for supply-demand balance, water quality analysis, water age assessment and long-term capacity planning. Average demand is not sufficient on its own, however, because water infrastructure must also be capable of meeting higher demand conditions. The planning framework therefore also uses peak demand measures, including Peak Day, Mean Day Maximum Month and Peak Hour. These measures support capacity assessment for treatment, transfer, storage, reservoir, pump station and network infrastructure.

Monthly peaking factors are also part of the infrastructure planning process. In the latest revision, historical monthly bulk supply volumes were analysed to determine likely demand persistence over each month and to update the short-term monthly forecast. The forecast uses percentile ranges from 2.5 per cent to 97.5 per cent, representing a 95 per cent likelihood range for monthly peaking factors. This is relevant because actual demand can vary materially due to rainfall and other weather-related conditions.

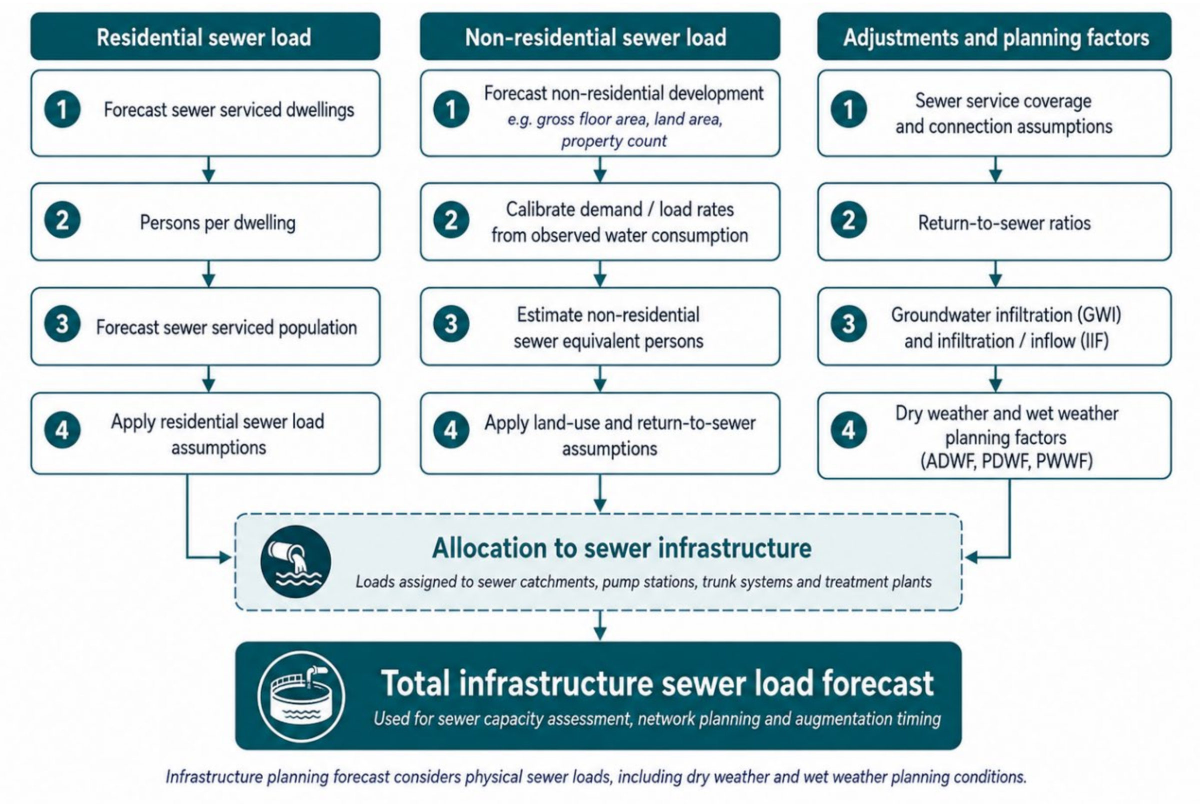
For infrastructure planning purposes, the final step is to compare forecast demand with available system capacity. Demand is allocated to the relevant supply scheme, zone and network level, then translated into average day, peak day, mean day maximum month and peak hour requirements. Those requirements are assessed against available transfer, storage and network capacity to identify capacity headroom, emerging capacity constraints and the likely timing of augmentation needs. The same forecast also supports the formal bulk water forecasts provided to Seqwater, which use the same underlying growth framework and include DMaTT growth forecasts, projected serviced population, non-residential equivalent persons, major customer intelligence, historical customer consumption, historical bulk supply, non-revenue water and monthly peaking analysis.

5 Sewer Load Forecasting

Sewer load forecasting translates growth forecasts into future wastewater service requirements. It uses the same underlying spatial growth framework as water demand forecasting, but it applies sewer-specific assumptions because wastewater loads are not a simple one-for-one conversion of water supplied. Not all water supplied to a property returns to sewer, and sewerage systems must also account for groundwater infiltration and rainfall-dependent infiltration / inflow.

A summary of the approach is shown below:

***Figure 5-1** Summary of approach to forecast sewer load*



The purpose of sewer load forecasting is to estimate future loads on sewerage networks, pump stations, trunk systems and wastewater treatment systems so that Urban Utilities can assess capacity and plan future augmentation. The forecast therefore needs to identify the number of future sewered dwellings, sewered resident persons, non-residential equivalent persons, return-to-sewer assumptions and wet weather flow allowances. It is a physical infrastructure planning forecast, not simply a forecast of customer connections.

The sewer load forecast is underpinned by the same DMaTT parcel-level growth framework used for water infrastructure planning. DMaTT forecasts future dwellings, resident persons and non-residential equivalent persons. These forecasts are then allocated to sewer catchments and treatment catchments so that future load can be tested against the capacity of local sewers, trunk sewers, pump stations, rising mains and wastewater treatment plants.

The resulting forecast of sewer serviced dwellings is set out below:

***Table 5-1** Forecast sewer serviced dwellings by council area, 2025-26 to 2045-46*

Region	2025-26	2030-31	2035-36	2040-41	2045-46
Brisbane	566,493	593,142	624,567	661,524	693,760
Ipswich	105,844	133,942	156,998	181,226	202,503
Lockyer Valley	5,751	6,542	7,398	8,269	9,137
Scenic Rim	6,471	7,632	8,723	9,733	10,789
Somerset	4,473	5,387	6,143	6,770	7,246
Total	**689,032**	**746,645**	**803,829**	**867,522**	**923,435**

5.1 Forecast Residential Sewer Equivalent Persons

Sewer load forecasting is based on equivalent population as well as dwelling counts. The equivalent population is derived from Census-based occupancy rates. These rates are calculated separately for detached and attached dwellings within defined occupancy areas. Brisbane and Ipswich use SA2-based occupancy areas, while the regional Local Government Areas (LGAs) use grouped SA1 areas. Those occupancy rates are then multiplied by serviced dwellings to obtain a total residential equivalent population by council area.

Table 5-2 *Forecast residential sewer equivalent persons by council area, 2025-26 to 2045-46*

Region	2025-26	2030-31	2035-36	2040-41	2045-46
Brisbane	1,347,387	1,408,042	1,476,848	1,564,652	1,644,819
Ipswich	268,130	332,891	384,597	440,032	486,412
Lockyer Valley	13,918	15,795	17,840	19,966	22,046
Scenic Rim	15,201	18,119	20,884	23,464	26,167
Somerset	10,516	12,812	14,716	16,282	17,452
Total	**1,655,152**	**1,787,659**	**1,914,885**	**2,064,396**	**2,196,896**

5.2 Forecast Non-Residential Sewer Equivalent Persons

Non-residential sewer EP is derived from non-residential development and consumption-based equivalent-person assumptions, with sewer-specific adjustments such as return-to-sewer ratios.

The non-residential forecast is set out below:

Table 5-3 *Forecast non-residential sewer equivalent persons by council area, 2025-26 to 2045-46*

Region	2025-26	2030-31	2035-36	2040-41	2045-46
Brisbane	380,767	393,515	404,254	417,262	428,157
Ipswich	56,665	69,186	81,636	92,168	102,298

Region	2025-26	2030-31	2035-36	2040-41	2045-46
Lockyer Valley	4,141	4,391	4,652	4,857	5,089
Scenic Rim	3,024	3,241	3,496	3,685	3,855
Somerset	2,923	3,102	3,300	3,497	3,646
Total	**447,520**	**473,435**	**497,338**	**521,469**	**543,045**

5.3 Application for Infrastructure Planning

The sewer load forecast is used to assess whether existing sewerage infrastructure has sufficient capacity to service forecast growth. Forecast loads are allocated to sewer catchments, pump station catchments, trunk systems and wastewater treatment plant catchments. These loads are then compared with available network and treatment capacity to identify where capacity headroom exists, where constraints may emerge, and when augmentation may be required.

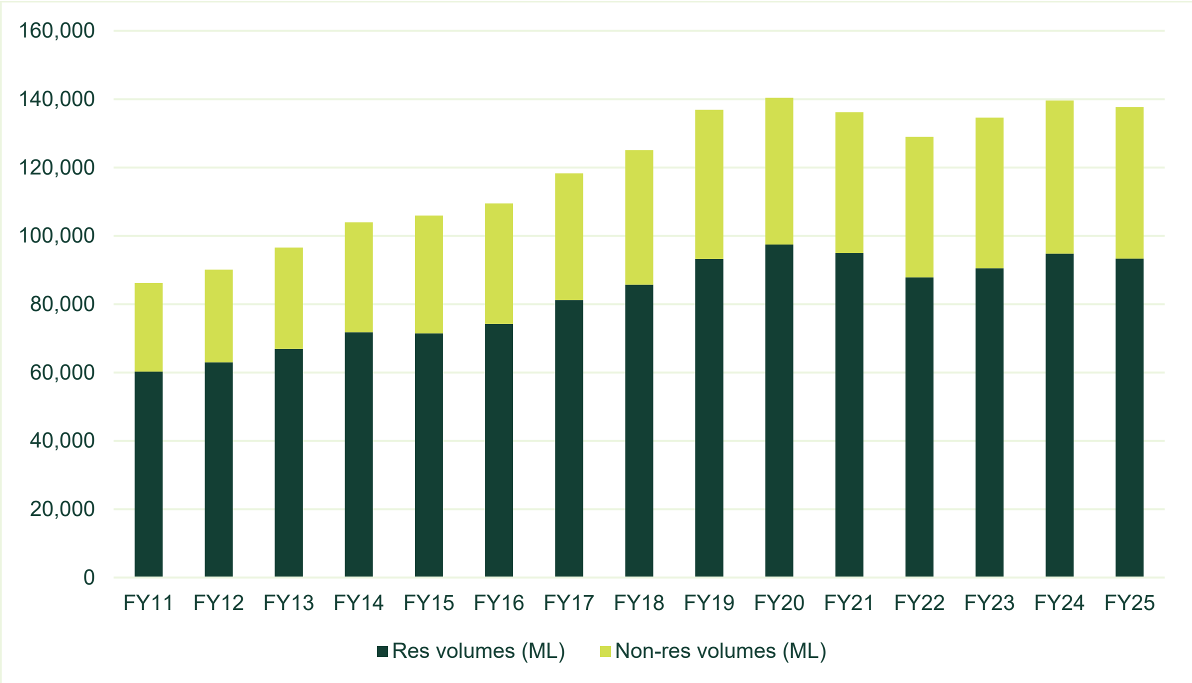
The timing and type of infrastructure response depends on the nature of the forecast constraint. Growth in dry weather loads may indicate the need for treatment plant, trunk sewer or pump station augmentation. Growth in wet weather loads may indicate the need for network upgrades, wet weather storage, inflow and infiltration management or other operational responses. This process links the sewer load forecast directly to capital planning by identifying the location, timing and scale of future sewerage infrastructure needs.

6 Historical Customer Demand

The preceding sections describe the long-term infrastructure planning demand forecast used to assess physical water demand, sewer load and capacity requirements. The following section explains recent billing demand trends and how that data and the planning assumptions are adapted for pricing purposes. The pricing demand forecast is a downstream forecast that estimates chargeable quantities for the FY28-30 price monitoring period.

Over the past ten years (FY15 to FY25) billed water demand has increased from 105.9 GL to 137.7 GL, representing an annual growth rate of 2.7%. However, this increase is not uniform as shown below.

***Figure 6-1** Billed Water Demand (ML)*

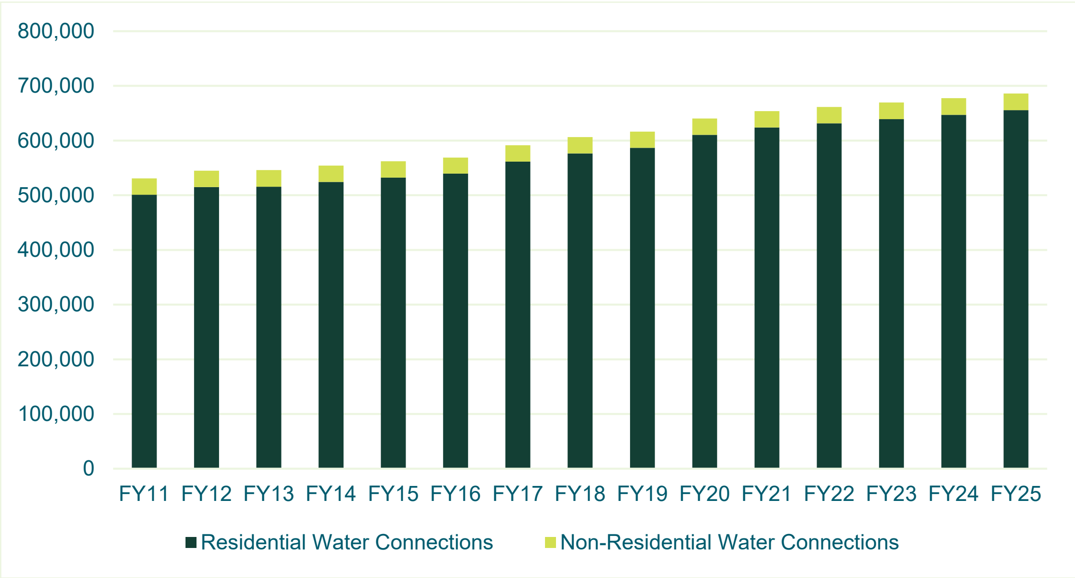


Demand increased strongly through FY18 to FY20, before softening in FY21 and FY22, reflecting the influence of temporary factors such as COVID-19-related changes in activity, weather conditions and periods of higher rainfall. Demand then increased again in FY23 and FY24, before easing slightly in FY25.

This historical variability indicates that total billed water demand is affected by factors beyond underlying customer growth, including weather, customer behaviour, economic activity and other short-term conditions. For this reason, the forecast does not mechanically extrapolate total historical demand. Instead, it separates customer growth from average consumption assumptions, using observed connection trends to forecast customer numbers and representative recent consumption levels to derive a central forecast of future demand.

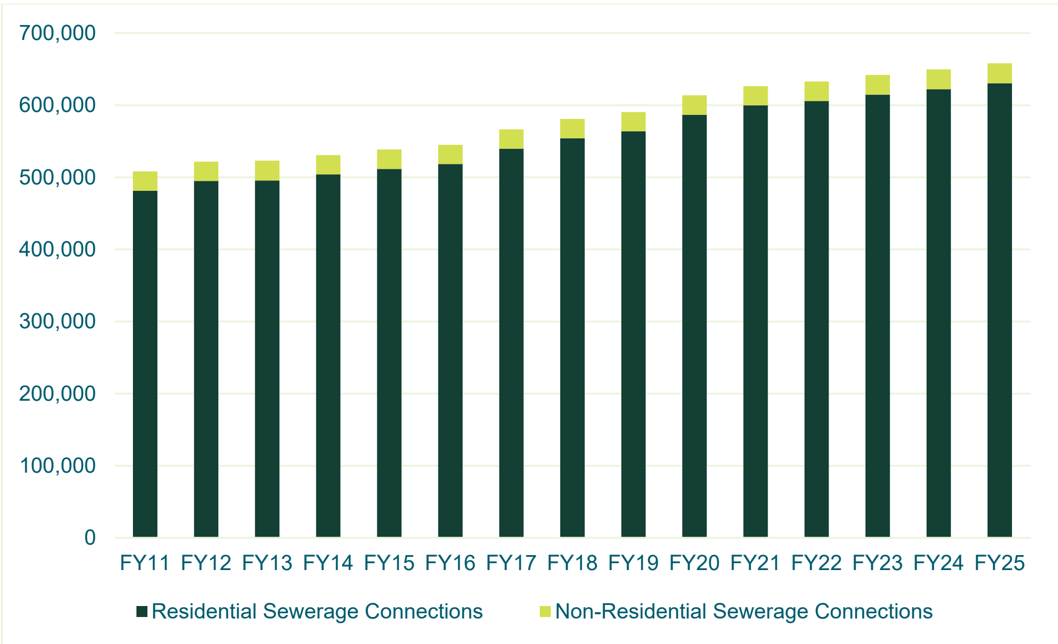
Growth in water connections has been more stable than billed water demand, as shown below, increasing at an average rate of 2.0% per year.

Figure 6-2 Water Connections



Likewise, sewer connections increased at a relatively constant rate of 2.0% per year.

Figure 6-3 Sewer Connections



7 Forecasting Approach for Pricing

This section describes the detailed steps used to forecast demand as an input to the pricing calculation. The pricing forecast builds on the infrastructure planning forecast described above, but is adjusted to reflect the different purpose of the pricing model.

The infrastructure planning forecast is designed to estimate total physical demand on the network, including non-revenue water such as system losses, unbilled consumption and other volumes that must be supplied but are not directly charged to customers.

By contrast, the pricing demand forecast is designed to estimate billable customer quantities. It is therefore calibrated to recent billing data so that observed customer behaviour, current customer numbers and short-term consumption trends are reflected in the pricing model.

As a result, the pricing forecast removes non-revenue water from the infrastructure planning forecast and refines the remaining volumes using the most recent billing outcomes and consumption patterns. This ensures that prices are based on forecast chargeable demand, rather than total system demand, resulting in lower demand for pricing than for infrastructure planning.

7.1 Residential Connections

Residential connection forecasts are developed using three primary inputs:

- billing data;
- historical customer growth trends; and
- long-term planning forecasts.

Forecasts are prepared separately for each council region to reflect differences in local growth rates, development patterns and recent customer connection trends. The approach is designed to produce a forecast that reflects both recent observed connection activity and the longer-term population and development assumptions used in Urban Utilities' broader planning processes.

The forecast begins with the current number of residential water service dwellings recorded in the Urban Utilities billing system, which provides the baseline estimate of active residential connections. Short-term growth in the current financial year is estimated using observed year-to-date connection growth, combined with representative historical annual growth rates to reduce the influence of temporary fluctuations in development activity, connection timing or abnormal growth outcomes.

Longer-term dwelling growth forecasts are based on projections developed by Urban Utilities' Integrated Planning function and associated demand modelling tools. These planning forecasts incorporate population projections, land-use planning assumptions, development approvals, cadastral information and expected development sequencing across the service region.

Forecast growth rates are reviewed against recent observed customer growth trends to ensure that the transition between historical and forecast periods is reasonable and internally consistent. Where material differences exist between planning forecast growth rates and recent observed growth, short-term adjustments are applied within the pricing model to smooth changes between years and avoid unnecessary step changes in the forecast.

The resulting regional forecasts are aggregated to produce the total residential connections forecast used in the pricing model.

The detailed forecasting process is set out below.

***Table 7-1** Method to calculate residential connections*

Forecast Step	Description and Method
Identify current residential water service accounts	The model begins by identifying the number of residential water service dwellings recorded in the billing system at the most recent observation date. This value represents the current number of active residential dwellings and is sourced from the Urban Utilities billing system (HansenCIS) for each council region. This step ensures that the most up-to-date data is used to set prices.
Combine with historical growth trends	In order to project the number of dwellings at the end of the financial year, a representative annual growth estimate for the current financial year is calculated. This is derived based on the observed growth in dwellings between the start of the financial year and the most recent observation date, and is adjusted to reduce the influence of short-term fluctuations in development activity or connection timing by averaging this observed growth with the actual observed annual increases in residential water service accounts for the previous four financial years (FY22–FY25).
Convert to daily growth rate	The representative annual growth estimate is converted to a daily growth rate by dividing the annual growth rate by the number of days in a year. This allows the forecast to project account growth over the remaining days of the current financial year.
Project accounts to end of FY26	The daily growth rate is applied to the number of days remaining between the observation date and the end of the current financial year (30 June 2026). The resulting projected increase in dwellings is added to the observed number of dwellings to estimate the total number of residential water service dwellings at the end of FY26.
Forecast accounts for FY27– FY30	Forecast growth in residential dwellings is based on dwelling projections prepared by Urban Utilities' Integrated Planning function. These projections are used as the basis for forecasting dwelling growth in the pricing model. The model produces forecasts of urban growth based on population projections, land-use planning assumptions and expected development patterns across the service region.

The underlying infrastructure planning process that informs the pricing forecast is summarised below:

***Table 7-2** Infrastructure Planning Demand Forecast*

Forecast Step	Description and Method
Establish baseline	The forecasting process begins by establishing a baseline estimate of the current service population and customer base. This baseline is derived from census occupancy rates and Integrated Planning's demand

Forecast Step	Description and Method
population and customer base	forecasting datasets to estimate the current Equivalent Population (EP) and number of serviced properties.
Forecast future population and development	Future population and customer growth is modelled using the Demand Modeller and Tracking Tool (DMaTT), a parcel-level development forecasting model. DMaTT integrates land-use zoning and planning scheme information, development applications and approvals, cadastral parcel data, population projections from the Australian Bureau of Statistics and Queensland Government Statistician's Office, and historical water consumption data.
Estimate future dwelling and population growth	Using these inputs, the development model estimates the ultimate development capacity of each parcel and sequences the timing of development over the forecast horizon. This produces forecasts of future dwellings and equivalent population at the parcel level, which are then aggregated to relevant geographic and planning levels.
Adjust forecast growth rates to smooth differences between observed and forecast growth	Forecast annual dwelling growth rates are aligned with IS forecast annualised growth rates wherever possible. If there is a material difference between observed historical dwelling growth rates and the IS forecast annualised growth rates, adjustments are made in the pricing model to better align the planning forecast with the most recent observed growth in residential water service dwellings recorded in the Urban Utilities billing system. This smooths out the change in dwellings from year to year and avoids unnecessary step-changes and pricing volatility Where adjustments are made, the observed customer growth between FY21 and FY26 is combined with the dwelling growth forecasts to ensure the dwelling forecast reflects both recent connection trends and the underlying planning assumptions. Adjustments are applied primarily in the first forecast period (FY26–FY31) where differences between historical growth and forecast growth are likely to be greatest. Beyond FY31, dwelling growth rates are aligned with the IS forecast growth rate.

The application of this method results in Residential Dwelling connection forecast growth of 1.3% as shown below:

***Table 7-3** Number of Residential Water Serviced Dwellings (mid-year quantities)*

Region	FY27	FY28	FY29	FY30
Brisbane	540,812	545,810	550,854	555,946
Ipswich	101,213	104,239	107,355	110,564
Lockyer Valley	12,456	12,677	12,903	13,132

Region	FY27	FY28	FY29	FY30
Scenic Rim	9,339	9,638	9,947	10,265
Somerset	6,214	6,333	6,455	6,580
Total	**670,034**	**678,698**	**687,514**	**696,486**

7.2 Residential Water Demand

Residential water demand is forecast using a bottom-up methodology that combines forecasts of residential dwelling growth with assumptions regarding average residential water consumption. The approach is intended to produce a reasonable and evidence-based estimate of future billed residential water volumes for pricing purposes.

The residential water demand forecast is developed using:

- forecast residential water volume dwellings;
- actual dwelling numbers;
- forecast population;
- equivalent persons per equivalent tenement (EP/ET) ratios;
- Litres per person per day (LPD) assumptions; and
- historical tariff tier proportions.

These inputs are used to estimate annual consumption per dwelling, calculate total residential water demand for each council region, and allocate forecast demand between Tier 1 and Tier 2 consumption volumes.

The forecast is developed separately for each council region within Urban Utilities' service area to reflect differences in population growth, dwelling characteristics and historical water consumption patterns. Regional forecasts are then aggregated to produce the total residential water demand forecast.

The methodology begins with the forecast number of residential dwellings consuming water, which is derived using the same underlying growth assumptions applied to residential water service dwellings. To reflect consumption over the full financial year, the model uses average mid-year dwelling numbers rather than start- or end-of-year connection counts.

Forecast water consumption is then estimated using assumptions regarding LPD water use and the average number of Equivalent Persons (EP) per Equivalent Tenement (ET).

Historical LPD values are derived using actual billed residential water volumes for the rolling 12 months to 31 March.[1] The volumes are divided by the relevant residential water volume dwellings and EP/ET ratio, and then converted to a daily per-person value. Where the most recent year is materially affected by an abnormal event, such as major flooding or COVID-19-related disruption, Urban Utilities may use the next most recent representative year.

The EP/ET ratio is used to convert forecast population into average dwelling-level water consumption and reflects the average number of people residing within each residential

[1] This pricing approach differs from Infrastructure Planning's longer-term LPD calibration, which uses a longer historical demand period to support long-term network and supply planning.

dwelling. Forecast EP/ET assumptions are derived from population and dwelling projections prepared by Urban Utilities' Integrated Planning function.

Total residential water demand is calculated by combining forecast dwelling numbers with estimated annual consumption per dwelling. Forecast residential demand is then allocated between tariff tiers using historical billing proportions to produce the forecast residential water volumes used in the pricing model.

In broad terms, forecast residential water demand is calculated by multiplying the average number of residential water volume dwellings during the year by the estimated annual consumption per dwelling. Annual consumption per dwelling is derived by multiplying the assumed litres per person per day (LPD) by the EP/ET ratio and the number of days in the year. The resulting total residential water demand is then allocated between Tier 1 and Tier 2 consumption using historical billing proportions.

The detailed forecasting process is set out below.

***Table 7-4** Method to calculate residential water demand*

Step	Description
1. Forecast residential dwellings consuming water	Estimate the number of residential dwellings with water volume consumption in each council region. Forecast dwelling growth is based on the same underlying growth assumptions used for residential water service dwellings.
2. Estimate mid-year dwelling numbers	To reflect demand over the full year, the model uses the average number of dwellings during the year rather than start- or end-of-year values (same approach used for service charge forecasts and consumption forecasts)
3. Estimate annual consumption per dwelling	Calculate expected annual water consumption per dwelling using the assumed LPD, EP/ET ratio and number of days in the year.
4. Calculate total residential water demand	Multiply the mid-year dwelling estimate by the annual consumption per dwelling to estimate demand for each council region.
5. Allocate demand between tariff tiers	Allocate total residential demand between Tier 1 and Tier 2 consumption based on historical billing proportions.
6. Calculate total residential water volumes	Combine Tier 1 and Tier 2 volumes to obtain the total residential water volume forecast.

LPD represents the average daily residential water consumption per person. Historical LPD values are derived by dividing the actual billed residential water volumes by the mid-year actual water volume dwellings, then dividing the result by the Equivalent Persons per Equivalent Tenement (EP/ET) ratio, and finally dividing the result by 365 to provide a daily value per person.

For the forecast period, LPD is based on recent observed LPD values to provide a central estimate for pricing and revenue forecasting. This gives weight to recent billing outcomes, including observed demand suppression in FY25 and available FY26 meter reading data. This approach may produce lower LPD assumptions than Infrastructure Planning forecasts, which use a longer historical calibration period and smoother long-term LPD assumptions for network and supply planning. Differences may also arise from the EP/ET assumptions used in each forecasting process.

Table 7-5 *Forecast Residential LPD*

Region	FY27	FY28	FY29	FY30
Brisbane	156.3	156.3	156.3	156.3
Ipswich	147.2	147.2	147.2	147.2
Lockyer Valley	122.8	122.8	122.8	122.8
Scenic Rim	153.1	153.1	153.1	153.1
Somerset	154.2	154.2	154.2	154.2
Total	**153.1**	**153.0**	**153.0**	**152.9**

Based on the above factors, residential water demand is forecast to increase by 1.5% per annum as shown below.

Table 7-6 *Forecast residential water demand (kL)*

Region	FY27	FY28	FY29	FY30
Brisbane	78,404,301	79,094,973	79,785,646	80,476,318
Ipswich	15,816,130	16,509,545	17,202,959	17,896,374
Lockyer Valley	1,477,242	1,509,040	1,540,837	1,572,635
Scenic Rim	1,146,700	1,179,824	1,212,948	1,246,072
Somerset	886,648	912,866	939,083	965,301
Total	**97,731,020**	**99,206,247**	**100,681,473**	**102,156,700**

7.3 Large Non-residential Connections and Water Demand

Large non-residential water demand is forecast using an account-specific approach that recognises the material contribution these customers make to total non-residential water consumption and revenue. Although large non-residential customers represent a relatively small proportion of total customer accounts, their water usage is significant and may vary substantially depending on operational activity, production levels and site-specific circumstances. As a result, these customers are forecast individually rather than through the average consumption assumptions applied to smaller non-residential customers.

The forecasting approach begins by identifying the large account-managed customers within the Urban Utilities customer base. This group comprises account-managed customers, including key customer accounts and other large consumption accounts managed by the Customer and Innovation team.

The baseline forecast for each customer is established using the most recent observed annual billed water consumption recorded in the billing system. Forecast consumption assumptions are then reviewed in consultation with Urban Utilities' commercial accounts team, which maintains direct engagement with these customers and understand operational factors that may influence future water demand.

Where specific changes in customer activity are known or reasonably anticipated, adjustments are made to individual customer forecasts to reflect expected changes in consumption. These may include facility expansions, operational shutdowns, changes in production activity, redevelopment, or other customer-specific factors likely to materially affect water use. Where no material change is expected, customer demand is generally assumed to remain consistent with recent observed consumption patterns.

The individually reviewed customer forecasts are then aggregated to produce the total forecast demand attributable to large non-residential customers. This approach allows the forecast to incorporate the best available operational and customer-specific information while recognising the concentrated influence that large customers can have on total non-residential water demand.

The detailed forecasting process is set out below.

***Table 7-7** Method to calculate Large Non-residential Connections and Water Demand*

Step	Description
1. Identify large non-residential customers	Non-residential demand forecasting distinguishes large account-managed customers from the broader population of smaller non-residential accounts. The largest approximately 1,000 customers represent a relatively small share of accounts by number but account for a significant proportion of non-residential water revenue and consumption.
2. Establish baseline consumption	The starting point for forecasting demand for each large customer is the most recent observed annual water consumption recorded for that account.
3. Review customer information	Consumption forecasts are reviewed annually in consultation with Urban Utilities' commercial accounts team, which maintains direct relationships with these customers and understands the operational activities that may affect water demand.
4. Identify expected changes in demand	The commercial team identifies any known changes that may influence water use in the coming year. This may include factors such as facility expansions, operational shutdowns, changes in activity levels, or other operational developments.
5. Adjust individual customer forecasts	Where changes in consumption are anticipated, adjustments are made to the forecast at the individual customer level to reflect the expected change in water demand.
6. Apply baseline consumption where no	Where no material change in operations is expected, the forecast assumes that the customer's water consumption will remain consistent with the most recent year of observed usage.

Step	Description
change is expected	
7. Aggregate total demand	The adjusted consumption forecasts for individual large customers are aggregated to estimate the total water demand attributable to large non-residential customers.

7.4 Small Non-residential Connections and Water Demand

Small non-residential water demand is forecast using an aggregate approach for non-residential customers that are not reviewed individually as large account-managed customers. This customer group represents the majority of non-residential accounts and includes a diverse range of commercial, industrial, institutional, community and other non-residential users. Because this group contains a large number of relatively low-volume accounts, and because customer-specific operational information is not available for each account, forecasting demand at the individual account level is not practical or proportionate.

The forecast therefore uses an average-consumption approach. The starting point is the most recent observed billed consumption for the small non-residential customer group, after excluding large account-managed customers that are forecast separately. Average consumption per account is calculated and reviewed against recent historical outcomes to assess whether the most recent year is representative. Where historical movements reflect one-off effects, timing issues or abnormal customer changes, judgement is applied to select a representative consumption assumption.

The number of small non-residential accounts is forecast using recent observed account growth trends. Historical account growth is assessed by council region, with representative years used to avoid giving undue weight to abnormal movements or reclassification effects. The forecast demand for small non-residential customers is then calculated by multiplying the forecast number of accounts by the representative average consumption per account.

The resulting small non-residential demand forecast is combined with the individually reviewed large customer forecast to produce total non-residential water demand for the pricing model.

***Table 7-8** Method to calculate Small Non-residential Connections and Water Demand*

Step	Description
1. Identify small non-residential customers	Identify non-residential customers that are not forecast individually as large account-managed customers.
2. Establish baseline consumption	Calculate the most recent observed billed water consumption for the small non-residential customer group, excluding large customers forecast separately.
3. Determine representative average consumption	Calculate average consumption per account and assess recent historical outcomes to determine whether the most recent year is representative. Where abnormal movements are identified, apply judgement to select a representative assumption.

Step	Description
4. Forecast the number of accounts	Forecast the number of small non-residential accounts using recent observed account growth trends by council region.
5. Apply historical growth trends	Apply representative historical account growth rates, excluding abnormal or one-off movements where appropriate.
6. Calculate total demand	Multiply forecast account numbers by representative average consumption per account for each council region.
7. Produce aggregate demand forecast	Aggregate council-region forecasts and combine the small non-residential demand forecast with the separately forecast large customer demand forecast to produce total non-residential water demand.

This approach is consistent with transparent, evidence-based demand forecasting principles because it uses observed billing data as the starting point, applies historical account growth and consumption trends in a transparent manner, and applies judgement only where required to avoid abnormal or non-representative outcomes. Separating large account-managed customers from the broader non-residential customer base also improves forecast accuracy by recognising that a small number of customers can materially influence total non-residential demand.

The forecast outputs used in the pricing model are presented below. These include the forecast customer number inputs used to calculate fixed charges and the forecast water demand volumes used to calculate usage charges.

Forecast non-residential connections are shown below. These account forecasts support both fixed service charge revenue and the calculation of non-residential water demand for customers forecast using average consumption assumptions.

Table 7-9 *Forecast non-residential connections (mid-year quantities)*

Region	FY27	FY28	FY29	FY30
Brisbane	26,727	26,862	26,997	27,133
Ipswich	2,639	2,693	2,748	2,804
Lockyer Valley	548	558	567	577
Scenic Rim	684	693	703	713
Somerset	472	480	488	496
Total	**31,070**	**31,285**	**31,503**	**31,723**

The large and small non-residential customer forecasts are combined to produce the total forecast non-residential water demand. The forecast includes demand from standard non-residential customers as well as metered standpipe and tanker filling stations. These volumes are used to calculate non-residential water usage revenue in the pricing model.

Table 7-10 *Forecast non-residential water demand (kL)*

Region	FY27	FY28	FY29	FY30
Brisbane	36,542,213	36,726,093	36,910,897	37,096,632
Ipswich	7,082,228	7,227,564	7,375,883	7,527,245
Lockyer Valley	1,196,613	1,217,072	1,237,880	1,259,045
Scenic Rim	420,651	426,530	432,492	438,536
Somerset	1,265,960	1,287,192	1,308,780	1,330,730
Metered Standpipe and Tanker Filling Stations	877,457	881,163	884,885	888,622
Total	**47,385,122**	**47,765,614**	**48,150,817**	**48,540,810**

8 Sewer Charge Quantity Forecasts for Pricing

8.1 Residential Sewer Connections

Residential sewerage service dwellings are forecast using a similar growth-based approach to residential water service dwellings. The key difference is that the forecast starts from the observed number of residential sewerage service dwellings recorded in the billing system, rather than from residential water service dwellings.

Forecast growth rates are based on the same underlying dwelling growth assumptions used for residential water service dwellings. This reflects the relationship between residential development and demand for sewerage services, while recognising that not all residential dwellings are connected to the sewerage network.

The forecast is prepared separately for each council region to reflect differences in sewerage network coverage and local development patterns. The model assumes that the proportion of residential dwellings connected to the sewerage network remains broadly consistent with the most recent observed billing data. This assumption is updated annually as new billing information becomes available.

In practical terms, the forecast applies residential dwelling growth rates to the observed residential sewerage service dwelling base for each council region. This produces the forecast number of residential sewerage service dwellings used to calculate sewerage service charges in the pricing model.

This approach is reasonable for pricing purposes because it is grounded in observed billing data, uses the same growth assumptions as the residential water service dwelling forecast, and maintains consistency between water and sewerage customer number forecasts while recognising differences in sewerage service coverage.

***Table 8-1** Forecast Residential Sewer connections (mid-year quantities)*

Region	FY27	FY28	FY29	FY30
Brisbane	533,474	538,404	543,380	548,402
Ipswich	94,520	97,346	100,256	103,253
Lockyer Valley	5,311	5,405	5,501	5,599
Scenic Rim	6,876	7,096	7,323	7,558
Somerset	3,967	4,043	4,121	4,200
Total	**644,148**	**652,294**	**660,581**	**669,012**

8.2 Non-Residential Sewer Connections

Non-residential sewer connections are forecast using a similar approach to non-residential water connections. The model assumes that the proportion of non-residential properties connected to the sewer network remains consistent with the proportion observed in the most recent year. The forecast number of sewered non-residential properties is therefore calculated by applying this proportion to the forecast number of non-residential water connections. This proportion is updated annually using billing system data to ensure the forecast remains aligned with observed connection patterns.

This approach ensures that the forecast for non-residential connections reflects both the historical stability of the non-residential customer base and the latest observed data on service connections recorded in the billing system.

***Table 8-2** Forecast Non - Residential Sewer connections (mid-year quantities)*

Region	FY27	FY28	FY29	FY30
Brisbane	24,713	24,901	25,090	25,280
Ipswich	2,222	2,263	2,306	2,349
Lockyer Valley	411	419	426	434
Scenic Rim	518	536	555	574
Somerset	323	328	333	338
Total	**28,187**	**28,447**	**28,710**	**28,976**

9 Non-Residential Service Charge Quantities

Non-residential water and sewerage service charge revenue is calculated using chargeable quantities that differ from simple account counts.

These quantities are used in the pricing model to calculate non-residential service charge revenue and are therefore forecast separately from non-residential water and sewerage connection numbers.

This approach is used because non-residential service charge revenue is driven by the number and size of meters and discharge characteristics of customers, rather than by customer numbers alone. Forecasting the cumulative water service Flow Capacity Factors (FCF) and sewerage service Discharge Factors (DF) × FCF for all non-residential customers therefore enables the pricing model to calculate non-residential service charge revenue.

9.1 Non-Residential Water Service FCF

For water services, the relevant chargeable quantity is the cumulative water service FCF. The calculation steps are set out below.

***Table 9-1** Method to calculate non-residential water service FCF*

Step	Description
1. Identify actual water service FCF	Sum the actual non-residential water service FCF quantity recorded in the billing system as at 31 March for all non-residential customers in each council region, consistent with the billing data cut-off used for the forecast.
2. Assess representative historical growth	Calculate the average observed growth rate in non-residential water service FCF over years considered representative of underlying growth.
3. Forecast water service FCF	Forecast non-residential water service FCF by applying the representative historical growth rate to the prior year water service FCF quantity.
4. Aggregate forecast quantities	Sum the forecast non-residential water service FCF quantities across the five council regions to calculate the total used in the pricing model.

The resulting forecast non-residential water service FCF quantities are shown below:

***Table 9-2** Forecast non-residential water service FCF (mid-year quantities)*

Region	FY27	FY28	FY29	FY30
Brisbane	95,559	96,172	96,790	97,411
Ipswich	15,331	15,795	16,274	16,767
Lockyer Valley	1,919	1,926	1,934	1,942
Scenic Rim	1,730	1,740	1,750	1,761
Somerset	1,222	1,237	1,252	1,267
Total	**115,760**	**116,871**	**118,000**	**119,148**

9.2 Non-Residential Sewerage Service DF x FCF

The forecast for non-residential sewerage service quantity is the product of the DF and FCF for each non-residential customer, referred to as the “sewerage service DF × FCF”. This quantity is prepared using the same broad approach as for the water service FCF as summarised below.

***Table 9-3** Method to calculate non-residential sewerage service DF × FCF*

Step	Description
1. Identify actual sewerage service DF × FCF	Sum the actual non-residential sewerage service DF × FCF quantity recorded in the billing system as at 31 March for all non-residential customers in each council region, consistent with the billing data cut-off used for the forecast.
2. Assess representative historical growth	Calculate the average observed growth rate in non-residential sewerage service DF × FCF over years considered representative of underlying growth.
3. Forecast sewerage service DF × FCF	Forecast non-residential sewerage service DF × FCF by applying the representative historical growth rate to the prior year sewerage service DF × FCF quantity.
4. Aggregate forecast quantities	Sum the forecast non-residential sewerage service DF × FCF quantities across the five council regions to calculate the total used in the pricing model.

The resulting forecast non-residential sewerage service DF x FCF quantities are shown below.

***Table 9-4** Forecast non-residential sewerage service DF × FCF (mid-year quantities)*

Region	FY27	FY28	FY29	FY30
Brisbane	72,005	72,410	72,817	73,227
Ipswich	9,971	10,405	10,857	11,329
Lockyer Valley	1,000	1,001	1,002	1,002
Scenic Rim	1,223	1,237	1,251	1,265
Somerset	719	725	730	735
Total	**84,918**	**85,776**	**86,656**	**87,558**

10 Non-Residential Sewage Disposal Volumes

Non-residential sewage disposal volumes are forecast separately from non-residential service charge quantities and trade waste volumes. These volumes are used to calculate non-residential sewage disposal charge revenue in the pricing model.

***Table 10-1** Method to calculate non-residential sewage disposal volumes*

Step	Description
1. Establish base year sewage disposal volume	Identify the actual annual non-residential sewage disposal volume for each council region for the rolling 12 months to 31 March. This is sourced from billing data and excludes Category 3A trade waste sewage disposal volumes, which are forecast separately.
2. Identify the applicable property growth rate	Identify the sewage disposal volume property growth rate for each council region. This growth rate is aligned with the non-residential sewerage service property growth rate.
3. Forecast regional sewage disposal volumes	For each council region, multiply the prior year non-residential sewage disposal volume by one plus the relevant sewage disposal volume property growth rate.
4. Aggregate the regional forecasts	Sum the forecast non-residential sewage disposal volumes across Brisbane, Ipswich, Lockyer Valley, Scenic Rim and Somerset to calculate the total Urban Utilities forecast.

The forecast is prepared separately for each council region. It begins with the actual annual non-residential sewage disposal volume for the rolling 12 months to 31 March. Forecast volumes are then calculated by applying the sewage disposal volume property growth rate. This growth rate is aligned with the non-residential sewerage service property growth rate, reflecting the assumption that non-residential properties with sewage disposal volumes will grow broadly in line with non-residential sewerage service properties.

The non-residential sewage disposal volume forecast excludes Category 3A trade waste sewage disposal volumes, which are forecast separately as part of the trade waste forecast. This distinction ensures that standard non-residential sewage disposal charges and trade waste charges are separately identified in the pricing model.

***Table 10-2** Forecast non-residential sewage disposal volumes (kL)*

Region	FY27	FY28	FY29	FY30
Brisbane	16,523,752	16,676,900	16,831,239	16,986,776
Ipswich	1,733,550	1,775,813	1,818,880	1,862,766
Lockyer Valley	148,768	152,174	155,643	159,177
Scenic Rim	208,150	217,382	226,940	236,834

Region	FY27	FY28	FY29	FY30
Somerset	105,823	107,797	109,801	111,837
Total	**18,720,042**	**18,930,066**	**19,142,504**	**19,357,391**

11 Trade Waste

Trade waste forecasts are prepared separately from the non-residential sewage disposal volumes described above. They estimate the chargeable quantities associated with non-residential customers that discharge trade waste to Urban Utilities' sewerage network. These forecasts are used in the pricing model to estimate revenue from trade waste charges and to ensure that forecast revenues are aligned with the expected level of trade waste activity.

The trade waste forecast is based on observed billing data for trade waste customers, including recent billed volumes and, where applicable, quality-related chargeable parameters. The forecast distinguishes between customer numbers, discharge volumes and any relevant quality or contaminant-based billing quantities used in the pricing model.

For Category 3A trade waste customers, who have material or customer-specific trade waste discharge requirements, forecasts are reviewed on an individual account basis using the most recent observed billing outcomes and any known information about changes in operations, production levels or discharge characteristics. Where no material change is expected, the forecast assumes that recent observed trade waste volumes and quality characteristics remain representative of the forecast period.

For Category 2 trade waste and tankered waste customers, the forecast is based on recent historical trends in customer numbers and billed discharge volumes. Representative historical outcomes are used to avoid giving undue weight to abnormal one-off movements, timing effects or customer-specific changes that are not expected to continue.

This approach ensures that the trade waste forecast is grounded in observed billing data, reflects known customer-specific changes where relevant, and applies judgement transparently where historical outcomes may not be representative of future demand.

***Table 11-1** Trade Waste Category 2 Volumes (kL)*

Region	FY27	FY28	FY29	FY30
Brisbane	4,208,954	4,213,163	4,217,376	4,221,593
Ipswich	545,015	545,560	546,106	546,652
Lockyer Valley	38,420	38,458	38,496	38,535
Scenic Rim	57,358	57,415	57,472	57,530
Somerset	24,173	24,197	24,221	24,246
Total	**4,873,919**	**4,878,793**	**4,883,672**	**4,888,555**

Table 11-2 Trade Waste Category 3A Sewage Disposal Volumes (kL)

Region	FY27	FY28	FY29	FY30
Brisbane	4,210,319	4,210,319	4,210,319	4,210,319
Ipswich	1,518,361	1,518,361	1,518,361	1,518,361
Lockyer Valley	0	0	0	0
Scenic Rim	0	0	0	0
Somerset	0	0	0	0
Total	5,728,680	5,728,680	5,728,680	5,728,680

Table 11-3 Tankered Waste Volumes (kL)

Region	FY27	FY28	FY29	FY30
Tankered waste volumes	65,092	65,092	65,092	65,092

Table 11-4 Sewage Content Quantities (tonnes) - Trade Waste Category 3A

Region	FY27	FY28	FY29	FY30
BOD	3,722	3,722	3,722	3,722
SS	1,004	1,004	1,004	1,004
TN	176	176	176	176
TP	46	46	46	46

Demand forecasts represent the most reasonable estimate of future customer numbers and water use based on the information available at the time the forecast is prepared. However, actual outcomes may differ from the forecast due to changes in external conditions, customer behaviour, or development patterns. The key sources of uncertainty affecting the demand forecast are outlined below.

12 Demand Risk Management

12.1 Use of the Central Demand Forecast

Urban Utilities adopts a central demand forecast representing its most reasonable estimate of future demand under normal operating conditions, based principally on the information available from state and local planning authorities, when the forecast is prepared.

For pricing and revenue forecasting, the central forecast is used to estimate the chargeable quantities expected to occur during the price monitoring period. A balanced and unbiased central estimate reduces the risk of systematic over- or under-recovery arising from demand assumptions that are deliberately weighted towards either a high or low outcome. The pricing demand forecast is recalibrated annually using the latest billing information, observed customer numbers and recent consumption trends so that it continues to reflect the most current evidence available.

For infrastructure planning, the central forecast is used as the base case for comparing projected demand with available water and wastewater network capacity and wastewater treatment capacity. This comparison identifies where capacity constraints may emerge and provides an initial indication of the timing and scale of potential augmentation requirements. Investment decisions consider up-to-date local demand and land use geography information, available capacity headroom, asset performance, service and compliance risks, delivery lead times and the ability to stage or defer works.

The central forecast is therefore used as a consistent decision-making reference, while regular forecast updates and complementary development impact assessment and tactical planning processes allow Urban Utilities to rapidly respond where actual demand develops differently from the central forecast.

12.2 Management of Demand Forecast Risk

Demand forecasts are inherently uncertain because actual spatial distribution and timing of growth and development may differ from the assumptions adopted when a forecast is prepared. Development proceeding in a location or sequence different to what planning authorities forecast may result in capacity constraints emerging earlier than expected, potentially creating service or compliance risks or requiring infrastructure to be delivered on an accelerated basis, with less time for efficient planning and delivery. Conversely, development not precipitating at locations or timings forecast by planning authorities may result in infrastructure being delivered before it is required, causing customers to bear the costs of premature investment. Both outcomes can increase costs and place upward pressure on prices.

For infrastructure planning, Urban Utilities refreshes its geographical development and land use forecasts regularly. Each refresh incorporates the latest available information on customer growth, development applications and approvals, construction and connection activity, measured network flows, and changes in the timing or location of expected development. Forecast demand is considered alongside available system capacity, asset performance, service and compliance risks, and infrastructure delivery lead times.

Proposed infrastructure investments are also subject to Urban Utilities' Gateway Decision Process. At successive decision gates, the need, timing and scale of an investment are reassessed against the latest available evidence, including actual demand, development activity, capacity headroom, service and compliance risks, and delivery lead times. Depending on the evidence available, an investment may be accelerated, deferred, staged or resized. This adaptive approach reduces the risk of customers funding capacity materially before it is required, while recognising that timely action may be necessary where capacity margins are reducing and infrastructure has long planning and delivery lead times.

Demand risk associated with pricing and revenue forecasting is managed separately. The pricing demand forecast is recalibrated annually using the latest billing data, observed customer numbers and recent consumption trends. Differences between forecast and actual demand and revenue are also managed through the applicable unders-and-overs arrangements. Together, annual recalibration and the unders-and-overs arrangements reduce the exposure of customers and Urban Utilities to short-term demand volatility while supporting the use of a balanced and unbiased central forecast for pricing purposes.

12.3 Weather and Climate Variability

Water demand is influenced by weather conditions, particularly rainfall and temperature.

Weather can affect indoor use, including showering and bathing frequency and duration. The effect of rainfall can be particularly material in areas where customers rely on rainwater tanks, dams, bores or dual rainwater/mains water systems, as wet periods can suppress mains water and private tanker demand while extended dry periods can increase demand as alternative storages are depleted.

In the absence of externally imposed water restrictions, periods of hot and dry weather can increase outdoor water use, while cooler or wetter conditions typically reduce consumption.

Although the forecast is based on representative average consumption patterns, actual water use in any given year may vary due to short-term weather variability. Extended drought conditions or unusually wet periods may therefore result in demand outcomes that differ from forecast levels.

12.4 Timing and Location of Development

Forecast growth in residential and non-residential connections is based on projections of future population growth and development activity. The timing of individual developments may vary from planning assumptions due to economic conditions, planning approvals, construction timelines, or changes in market demand. As a result, the actual number of new connections in a given year may differ from the forecast if development occurs earlier or later than expected, or if growth occurs in different locations within the service region.

12.5 Changes in Customer Consumption Behaviour

Average water consumption per customer is assumed to remain broadly consistent with recent observed patterns. However, customer behaviour may change over time due to factors such as increased adoption of water-efficient appliances, changes in landscaping practices, water conservation programs, or broader community attitudes toward water use (including externally imposed water restrictions). These changes may lead to higher or lower consumption than assumed in the forecast.

12.6 Non-Residential Activity Levels

Water demand from non-residential customers may be affected by changes in economic activity, industrial operations, or business expansion or contraction. While large customers are reviewed individually where known operational changes are expected, unforeseen changes in production levels or commercial activity may result in differences between forecast and actual demand.

12.7 Data and Forecasting Assumptions

The demand forecast relies on a range of input datasets and assumptions, including population forecasts, dwelling growth projections, and historical consumption trends. While these inputs represent the best available information at the time of preparation, future updates to planning forecasts or revisions to demographic projections may lead to differences between forecast and actual outcomes.

Urban Utilities regularly reviews customer growth and water demand data and updates its forecasts as new information becomes available. This ongoing monitoring helps ensure that forecasts remain aligned with observed trends and provides the basis for refining future demand projections.

13 Consistency with the SEQ Water Security Program

Urban Utilities contributes demand forecasts to the regional water supply planning framework for South East Queensland through the SEQ Water Security Program, which is administered by Seqwater. The demand forecasts used in this pricing submission are aligned with the forecasts prepared for the SEQ regional planning process to ensure consistency between retail demand projections and bulk water supply planning.

The residential dwelling and population growth projections used in the pricing demand model are based on the same underlying planning assumptions that inform the regional forecasts provided to Seqwater. These projections are developed by Urban Utilities' Integrated Planning function, which incorporates population forecasts, development approvals, planning scheme information and expected development patterns across the service region.

While the underlying growth assumptions are consistent with the forecasts used in the SEQ Water Security Program, the pricing demand forecasts may include minor adjustments to reflect the most recent observed customer growth and water consumption trends recorded in Urban Utilities' billing system. These adjustments are primarily applied in the short term to ensure the pricing forecasts remain aligned with actual connection growth and recent consumption behaviour.

This approach ensures that the demand forecasts used for pricing remain broadly consistent with the regional demand forecasts used for bulk water planning, while incorporating the most up-to-date information on customer numbers and water use within the Urban Utilities service region.

13.1 Future Changes to Regional Demand Assumptions

We understand Seqwater is undertaking a broader review of demand forecasting assumptions for the SEQ Water Security Program, including assumptions applying from 2028 onwards. This review may affect future regional planning forecasts and may also consider the impact of future water efficiency measures or obligations.

Urban Utilities has not sought to pre-empt the outcomes of that review in this pricing forecast. The forecast used for price setting is based on the best available information at the time of preparation, including current billing data, observed consumption trends, customer growth data and planning assumptions. Where future updates to SEQ Water Security Program assumptions become available, Urban Utilities will consider whether those changes materially affect the demand assumptions used for pricing purposes.

Urban Utilities understands any potential water efficiency obligations represent a source of uncertainty because they may reduce average consumption over time relative to recent observed levels. At this stage, the timing, form and impact of any such obligations remain uncertain. For that reason, the central forecast does not include a specific adjustment for future water efficiency obligations unless and until those obligations are sufficiently defined and supported by evidence. This treatment avoids introducing speculative adjustments while recognising the issue as a relevant forecast uncertainty.