

# Warwick

regional water supply security assessment



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# Introduction

The town of Warwick lies on the banks of the Condamine River approximately 160 km southwest of Brisbane. It is both a regional centre for agricultural production and the administrative centre of the Southern Downs Regional Council area.

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Southern Downs Regional Council supplies reticulated water to Warwick. The local communities of Allora and Yangan are also supplied from Warwick's reticulation network. Because these communities share the same bulk raw water supply sources, they are considered together in this document, and reference to Warwick generally includes Allora and Yangan.

Based on the Queensland Government Statistician's Office estimates, the combined population of Warwick, Allora and Yangan will increase from approximately 16 750 (June 2016) to approximately 20 330 by 2041. About 15 400 people (about 92% of the current population) are serviced by Warwick's water reticulation network. This figure is expected to grow to around 93% of the population (around 18 910 people) by 2041.

Safe, secure and reliable water is an essential resource for Warwick, not only providing for the health and wellbeing of the community, but also providing opportunities for economic and community development. Southern Downs Regional Council is the registered water service provider for Warwick's urban water supply and provides both water supply and waste water services to most of Warwick's urban areas.

The Queensland Government, through the Department of Natural Resources, Mines and Energy (DNRME), and council committed to a partnership to investigate and establish a shared understanding of the existing security of Warwick's urban water supply system and its capacity to support current demands and future growth. Arising from this partnership, this regional water supply security assessment (RWSSA) provides valuable information to the community and water supply planners about Warwick's urban water supply security, thereby providing a foundation for future water supply management by council.

This assessment has considered a number of water demand scenarios for the population of Warwick to identify the timing and magnitude of potential water supply risks. The assessment shows that Warwick's water supply from Leslie Dam is able to meet Warwick's current and projected urban water requirements until at least 2041 with a high degree of reliability. It is important to note that information presented in the assessment is based on the capacity of the existing water supply system and associated infrastructure.





## Water supply sources

Warwick's primary water supply source is the Upper Condamine Water Supply Scheme (Upper Condamine WSS), which is supported by releases from Leslie Dam. Water in the Upper Condamine WSS is managed under the Water Plan (Condamine and Balonne) 2004 and administered through the Condamine and Balonne Resource Operations Plan 2008.

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Most of Warwick's water supply is taken directly from Leslie Dam. Prior to the construction of Leslie Dam, Warwick's sole water supply source was Connolly Dam. Connolly Dam has since been used at council's discretion to supplement Warwick's water supplies.

Leslie Dam is located about 12 km west of Warwick and lies across Sandy Creek. The dam was constructed in 1965, and was raised to double the dam's storage capacity over the period 1980 to 1986. Leslie Dam has a full supply volume of 106 200 megalitres (ML) and a minimum operating volume of 2130 ML. (As part of a drought response, council is permitted to extract water down to a storage volume of 220 ML.) Leslie Dam is the main water storage for the Upper Condamine WSS, which provides urban water to towns including Warwick, Allora and Yangan, and irrigation water for crops grown in the area. Leslie Dam has a catchment area of 603 km<sup>2</sup>, and is owned and managed by SunWater.

Connolly Dam (formerly Silverwood Dam) is located approximately 15 km south of Warwick and lies across Rosenthal Creek. Construction of Connolly Dam was completed in 1927, and the dam has a full supply volume of 2590 ML and a minimum operating volume of 400 ML. Connolly Dam has a catchment area of 134 km<sup>2</sup>, and is owned and managed by council.

Water extracted from Leslie Dam and Connolly Dam is transferred to Warwick by pipeline for treatment at Warwick's water treatment plant (Figure 1). From here, treated water is distributed to the town's various reservoirs and to the townships of Allora and Yangan.

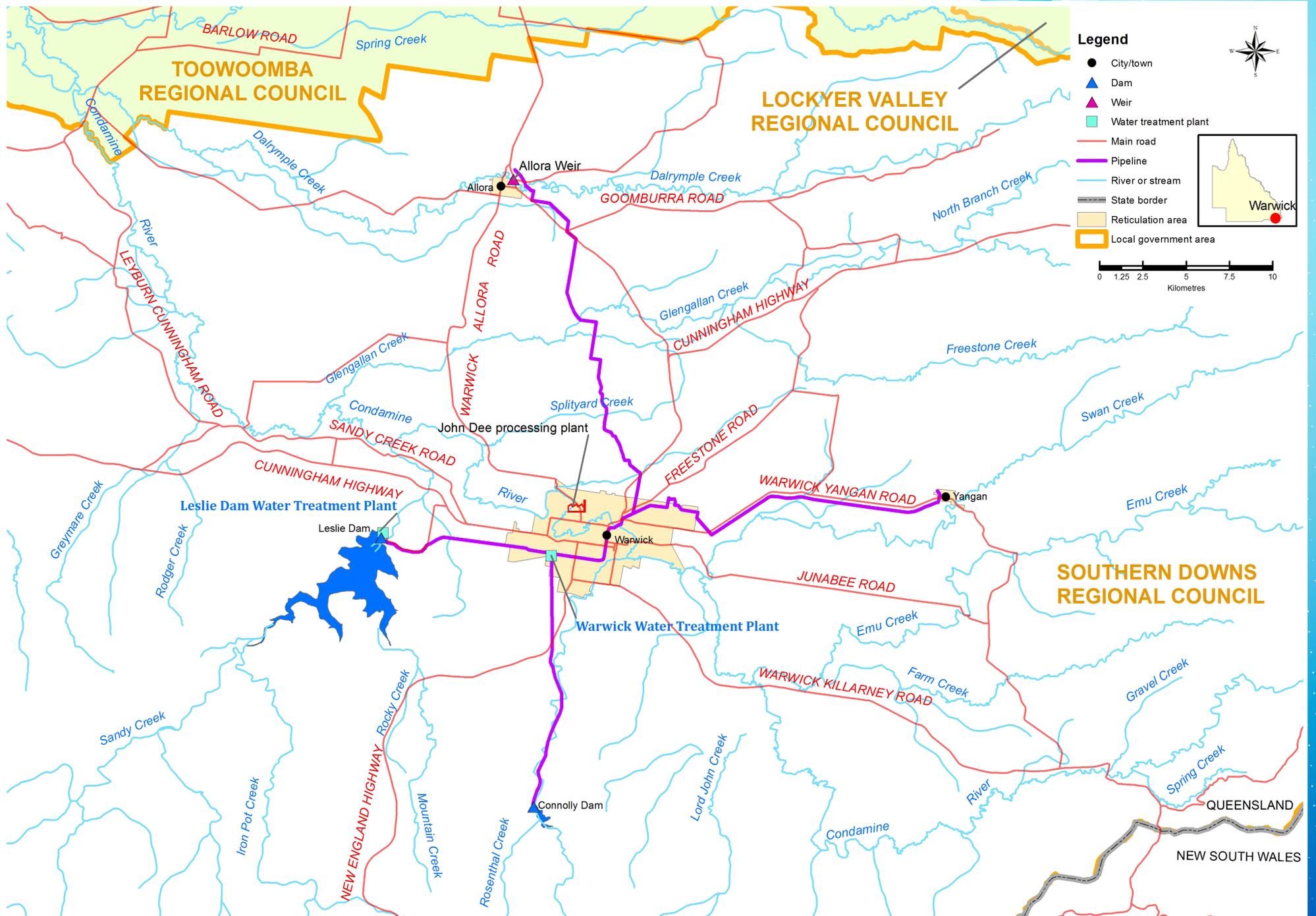


Figure 1: Location of Warwick, Allora and Yangan, and the water supply sources of Leslie Dam and Connolly Dam

# Water users and water demand

The Warwick reticulation network provides water for urban purposes to about 15 400 people (as at June 2016)—about 92% of the combined residential population of Warwick, Allora and Yangan.

## Warwick’s reticulation network

Council currently holds 3207 megalitres per annum (ML/a) of high-priority water allocations from Leslie Dam and 2727 ML/a of less reliable allocation from Connolly Dam. Information from the Statewide Water Information Management database shows that the total volume of water sourced from Leslie Dam and Connolly Dam for the reticulation network over the 9 years from 2008–09 to 2016–17 averaged about 2140 ML/a (ranging from around 1820 ML/a to 2560 ML/a).

Based on the total volume of water sourced and the serviced population, the average water demand from Leslie Dam and Connolly Dam during this period (2008–09 to 2016–17) was approximately 395 litres per capita per day (L/c/d). This figure accounts for residential, commercial, municipal and industrial water supplied from the reticulation network, plus any system losses. It also includes water use by the transient population, such as tourists and temporary workforces. Water use by the transient population is accounted for under the category of commercial use; however, the transient population is not included in the serviced population figures.

The average residential water use for this period was approximately 239 litres per person per day.

## Recycled water

A significant proportion of the water supplied through Warwick’s reticulation system is ultimately returned to Warwick’s waste water treatment plant after it has been used (e.g. for showers, laundry etc.) and is subsequently recycled. Warwick’s waste water treatment plant supplied on average 1130 ML (ranging from around 980 ML to 1550 ML) of recycled water per year from 2008–09 to 2016–17. This means that, on average, more than half of the water supplied to meet Warwick’s urban demand is subsequently recycled. The recycled water produced is used for agricultural, commercial, industrial and municipal uses (e.g. irrigation of sporting fields, parks and gardens), which potentially reduces demand on Leslie Dam and Connolly Dam.

## Water demand affected by climate variations

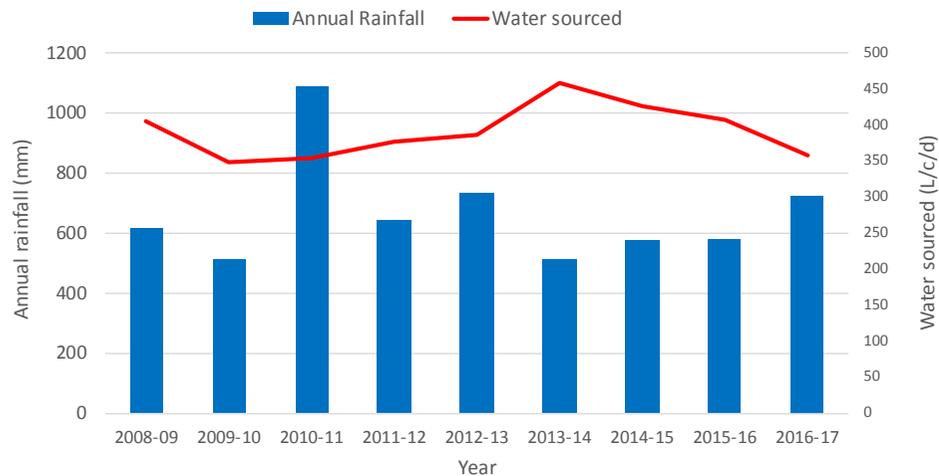
Urban water demand varies between years and within each year, depending on various factors including climatic conditions such as rainfall, with higher demand usually occurring during hotter, drier periods. However, extended dry periods may also result in reduced water availability as dam levels become low.

Average rainfall for Warwick is about 667 millimetres per annum (mm/a). The long-term historical rainfall data for Warwick (1915–16 to 2016–17) is summarised in Table 1. Average rainfall over the recent 2008–09 to 2016–17 period is similar to the average over the longer term.

**Table 1:** Summary rainfall statistics for Warwick

Rainfall station No. 41445 Leslie Dam.	Annual average (mm)	Median (mm)	Historic low (mm)	Historic high (mm)
1915–16 to 2016–17	667	651.2	389.1	1088.8
2008–09 to 2016–17	669	619.6	510.1	1088.8

Figure 2 shows Warwick’s total annual rainfall (GS 41445 Leslie Dam) for the period 2008–09 to 2016–17, and the total annual volumes of water sourced for Warwick’s reticulation network over the same period.



**Figure 2:** Total annual rainfall vs total water sourced

Figure 2 shows the extent that the amount of water sourced varies from year to year, ranging from approximately 348 L/c/d in 2009–10 to 464 L/c/d in 2013–14. During the 9-year period shown in Figure 2, 2013–14 was the driest year and, as may be expected, had the highest water demand.

### Climate change

The Queensland Government provides climate change projections for 13 Queensland regions, including the Eastern Downs region in which Warwick is located. The projections are based on data from the CSIRO and the Bureau of Meteorology, and are referenced against the historical period 1986–2005 for temperature, evaporation and rainfall. In general, Queensland’s future climate is projected to be warmer and drier, with increased evaporation and a potential increase in the annual and inter-annual variability.

By 2050 for the Eastern Downs region, under a scenario where greenhouse gas emission levels remain unchanged, it is projected that the median value of:

- average annual temperature may increase by 1.9 °C
- average annual evaporation may increase by 6%
- average annual rainfall may decrease by 6%.

These projections are an average for a region, and therefore the degree of change across the region may vary.

The projected climatic changes may potentially result in reductions in water supply availability and increases in average annual water demands within the region. Further, an increase in the annual and inter-annual climatic variability may result in longer dry periods, consequently increasing the duration of higher demand periods.



## Other users of the bulk water supply sources

### Agriculture

The Southern Downs region is heavily dependent on agriculture, with the local economy largely based on agriculture, agricultural support industries (e.g. abattoirs, wineries, rural produce and machinery suppliers) and tourism. The main agricultural industries in the Warwick area include livestock (mainly cattle, sheep and pigs) and livestock products, and crops (including vegetables, cotton, sorghum, maize, soybean, sunflower, barley, oats, wheat and lucerne among others).

Water for the region's agriculture is primarily supplied through about 175 000 ML/a of unsupplemented water allocations and water licences in the Upper Condamine Water Management Area. However, significant volumes of supplemented water allocations (over 30 000 ML/a) are supplied from the Upper Condamine Water Supply Scheme (WSS), which is supported by releases from Leslie Dam.

Agricultural water demand from the Upper Condamine WSS is several times the volume of the urban water demands. Under the Condamine and Balonne Resource Operations Plan, releases or diversions of water must not be made to supply medium-priority water allocations (which are primarily used for agriculture) when the storage level in Leslie Dam is less than or equal to 460.35 m AHD (Australian Height Datum)—around 15 000 ML. This is to ensure that the urban water demand for Warwick, Allora and Yangan can continue to be met.

Water allocations in the Upper Condamine WSS are subject to a system of announced allocations, which determine the percentage of the allocation volume that can be extracted from the WSS throughout the year. Announced allocations are calculated according to formulas provided in the Condamine and Balonne Resource Operations Plan, based on (among other things) the available water in the storage. For the period 2004–05 to 2016–17, most of the water available each year through the announced allocations was delivered for use.

### Industry

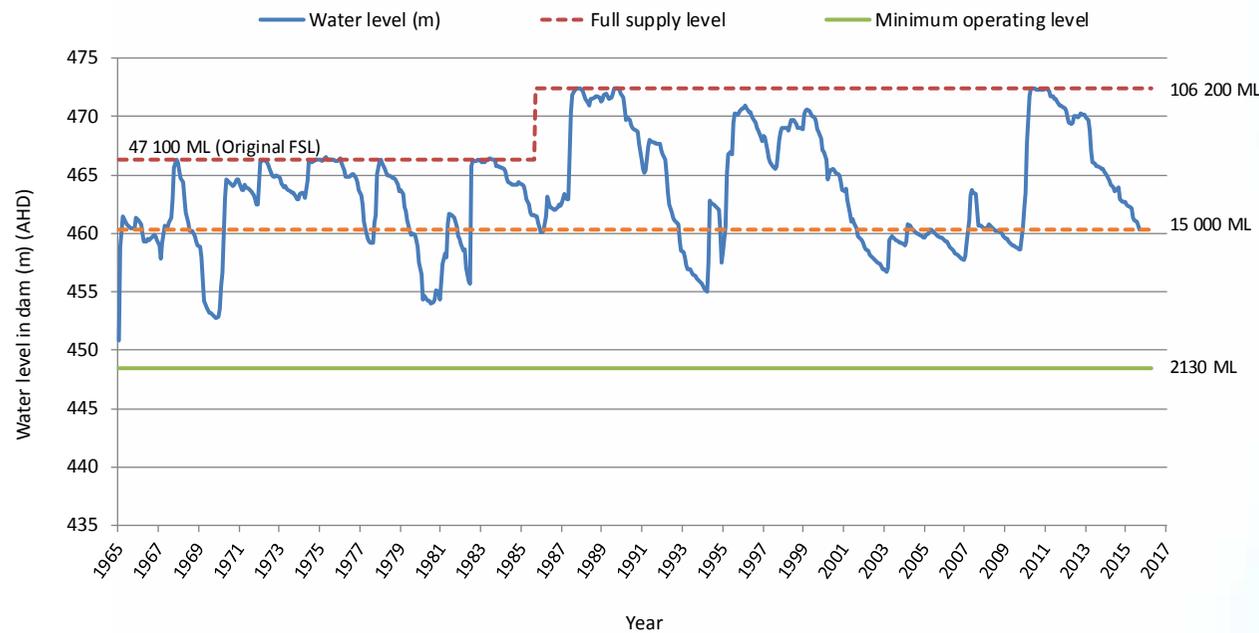
There is no significant industrial water demand on Warwick's water supply sources from industries outside Warwick's urban area. The main industries in Warwick are associated with retail trade, agribusiness, manufacturing, construction, tourism and transport. One of the more significant industries in Warwick is the John Dee meat processing plant, which is a global exporter producing mainly beef. Like most other industries within Warwick's urban area, the meat processing plant operates using water from Warwick's reticulation network. As such, water use by these businesses is accounted for within the total water demand figures for the network, under the category of 'industrial, commercial and municipal water use'. Over the period 2008–09 to 2016–17, the combined industrial, commercial and municipal water use in Warwick constituted on average about 33% of Warwick's total water demand.

There is currently no mining activity in the Warwick area, although there are a number of quarries. These quarries do not draw on town water supplies.

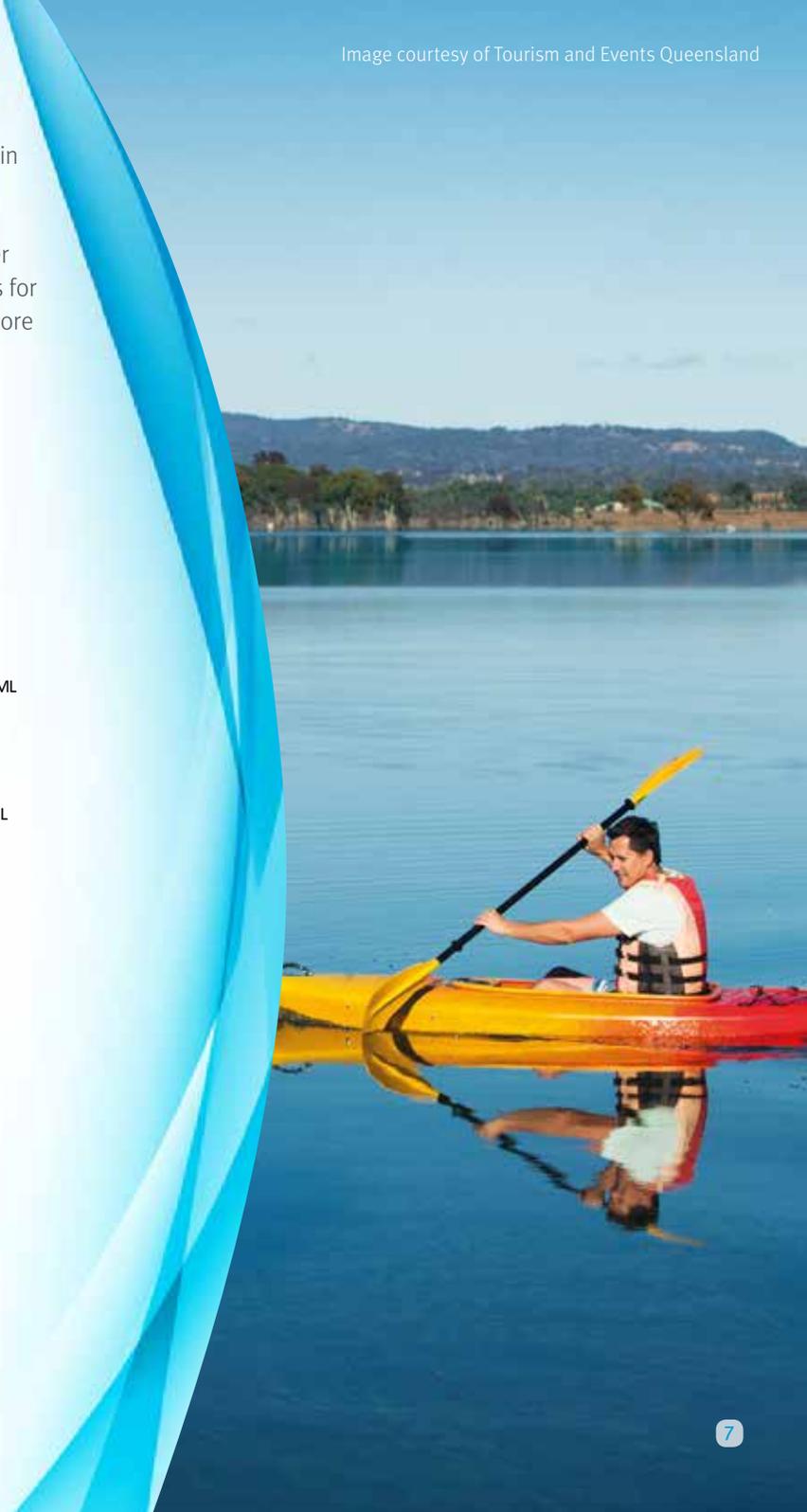
## Historical performance of Leslie Dam

Figure 3 illustrates the recorded storage behaviour of Leslie Dam from 1969 to mid-2016. There have been no urban supply failures to date from Leslie Dam. However, on a number of occasions the water level in the dam has fallen below 460.35 m AHD, or about 15 000 ML. As discussed earlier, the release of water for medium priority allocations is cut off when water levels in the dam fall below this level. At this storage level, there is still several years' urban water supply left for Warwick,

even with only minimal inflows, which helps to maintain security of supply for Warwick during successive dry years. Nonetheless, the storage has sometimes fallen to levels low enough for council to impose urban water restrictions to help conserve remaining water supplies for the community. (Water restrictions are discussed in more detail later.)



**Figure 3:** Leslie Dam—Recorded storage behaviour from 1965 to mid-2016



# Future water demand

Well-founded water supply planning necessitates an understanding of the likely (and possible) changes in water demand into the future.

In developing a projection of Warwick's future water demand, it is essential that all key assumptions, such as rates of water use and population growth, are identified and agreed upon. The projections will remain subject to ongoing monitoring of actual population growth and variations in water use trends (e.g. changes in water use practices may increase or decrease consumption).

## Warwick's reticulation network

The population of Warwick and the nearby communities of Allora and Yangan is projected to increase from about 16 750 (June 2016) to about 20 330 by 2041. This population growth is expected to result in the serviced population increasing from around 15 400 (June 2016) to about 18 910 by 2041.

The average daily water demand for Warwick over the 9-year period from 2008–09 to 2016–17 was approximately 395 L/c/d. It is important to note that this figure represents average demand rather than high demand, such as may occur during hotter dry periods, and therefore the average daily demand level will often be exceeded. However, Leslie Dam has the capacity to supply water through multiple years, and the impact of these fluctuating demand levels on the storage volume is generally averaged out. The use of an average demand figure provides a means of directly comparing future demand projections to determine when demand is likely to exceed available supply. For planning purposes, this means an appropriate balance can be reached between the cost of water supply and the demand for available water.

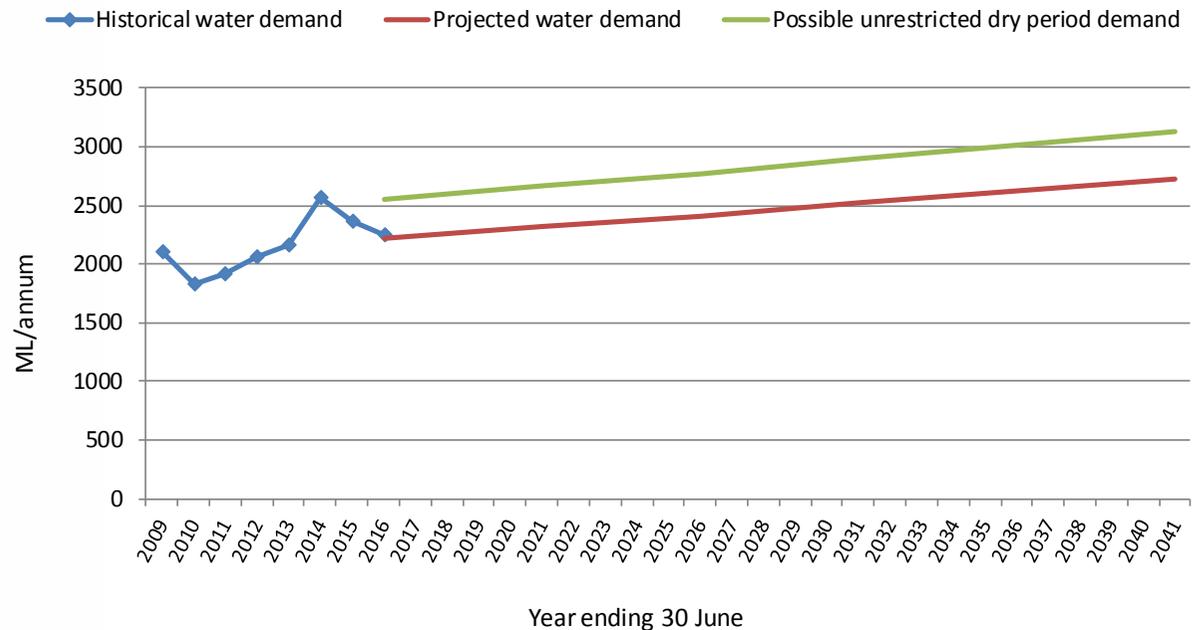


Figure 4: Warwick's projected average urban water demand

Figure 4 shows the projected average urban water demand for Warwick, which is projected to increase from approximately 2220 ML/a in 2016 to approximately 2725 ML/a by 2041. This assumes per capita consumption remains at an average of 395 L/c/d. Also shown in Figure 4 is a projected higher demand, possible during extended dry periods, which reaches approximately 3135 ML/a by 2041.

## Recycled water

Water demand that is met through the use of recycled water from Warwick's waste water treatment plant is not included in the projected demands for Warwick. If, for any reason, this recycled water supply becomes unavailable in the future, some of this demand might switch to Leslie Dam and Connolly Dam (for example, watering of some parks and gardens).

## Other users of the bulk water supply sources

### Agriculture

The scope for increasing agricultural production within the area of the Upper Condamine WSS appears to be limited by several factors, including both the availability of further suitable land for cultivation and the availability of water for irrigation. The majority of land suitable for cultivation surrounding the Condamine River downstream of Warwick (within the Upper Condamine WSS) is already under cultivation, which limits the potential for further agricultural land development.

There are no reserves of unallocated surface water in the Condamine and Balonne Water Plan. Although there are general reserves of groundwater, the Upper Condamine alluviums are subject to an active water recovery process through which the Commonwealth Government is purchasing significant volumes of water entitlements. This may lead to greater dependence on surface water supplied from the Upper Condamine WSS, Upper Condamine Water Management Area and other sources.

### Industry

Future growth in industry, and associated industrial water demand, is largely subject to changes in population and/or changes in the global economic environment that could lead to increased demand for exported products from the region (e.g. processed meat). Council actively promotes the development of industry and manufacturing in the Southern Downs Region, and works with industry leaders, prospective developers and new businesses to encourage growth in this sector. However, at this stage, there are no anticipated large-scale industrial developments or changes that are considered likely to significantly increase water demand from the water supply sources used for Warwick.

The prospect of mining occurring in the future in the Southern Downs Region is strongly discouraged by council and the community wherever it may impact on prime agricultural land, or prime tourist and rural lifestyle areas. Resource exploration and mining, including oil, coal and coal seam gas, is seen by council and the community as being in direct conflict with the thriving agricultural industry in the region.





## Water supply system capability

Hydrologic assessments have been undertaken to ascertain the capability of Warwick's existing bulk water supply system to meet current and projected future water demands.

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### Hydrologic assessment of Warwick's water supply system

Both historical and stochastic modelling techniques were used to simulate the performance of Warwick's water supply from Leslie Dam and Connolly Dam. Historical modelling was used to demonstrate how the water supply would have performed under historical climatic conditions for a range of demand levels and operating arrangements. Stochastic modelling was used to demonstrate how the water supply might perform under a wider variation of potential climatic scenarios, including during more severe droughts than those in the historical period of record.

Stochastic modelling involves generating data sequences that incorporate key statistical indicators from the historical record. One hundred replicates of 10 000 years of stochastic rainfall, evaporation and streamflow data were generated for the Leslie Dam and Connolly Dam catchment areas, and hydrologic modelling of each of the 100 replicates undertaken. Median outputs from the stochastic modelling have been presented in this assessment. Using the median outputs means that half of the replicate sequences had a lower frequency and half had a higher frequency of an event occurring.

The hydrologic assessments assume that all existing water entitlements from the dams or watercourses that support the system are fully developed and operational, with the exception of the water entitlements used to supply Warwick's reticulation network. Warwick's water demands were represented at various total annual demand levels, reflecting the impact of population growth.

Warwick currently obtains its water supply from Leslie Dam, with augmentation possible from Connolly Dam. Accordingly, consideration has been given to both the supply capability of Leslie Dam as a stand-alone system, as well as a supply system that is based on Leslie Dam augmented by supplies from Connolly Dam. For the augmented supply system, the hydrologic assessment assumed that Connolly Dam was used to supply 25% of Warwick's demand when Connolly Dam was above 25% of its full supply volume.

In an effort to reduce water consumption and extend the duration of the available water supply during extended dry periods, council has established a water restriction regime for Warwick based on the storage volumes of both Leslie Dam and Connolly Dam. The water restrictions primarily target outdoor water uses including watering of gardens, irrigation of sports fields and swimming pool use. Further details on water restriction rules are available on council's website.

Table 2 shows the combined storage volumes in Leslie Dam and Connolly Dam that trigger the various water restrictions, and the corresponding residential water use targets. The hydrologic assessment assumes that anticipated savings from the water restrictions will actually be achieved. For the modelling of Leslie Dam as a stand-alone system, restrictions were triggered solely on the volume stored in Leslie Dam.

**Table 2:** Warwick’s water restriction levels

Restriction level	Supply trigger levels (Remaining % of the combined ‘urban only’ water in Leslie Dam & accessible full supply volume in Connolly Dam)	Targeted maximum daily residential consumption (litres per person per day)	Percentage reduction applied to total demands modelled
Permanent	55% and above	230	0
Medium	On at (or below) 50% Relaxed at 55%	200	13
High	On at (or below) 30% Relaxed at 35%	170	26
Extreme	On at (or below) 15% Relaxed at 20%	140	39

Note: ‘urban only’ water means the water stored in Leslie Dam between approximately AHD EL 460.35 metres (storage volume of 15 000 ML) and Leslie Dam’s minimum operating level (storage volume of 2130 ML)

Note: Trigger levels and reduction targets are subject to review and amendment as determined by Southern Downs Regional Council from time to time

## Frequency of water supply shortfalls and water restrictions

For this assessment, Warwick is considered to have experienced a water supply shortfall when its water supply system (either Leslie Dam as a stand-alone system, or Leslie Dam with augmentation from Connolly Dam) is unable to meet the water demands placed on the system by Warwick’s community. This could, for example, occur as a result of the water supply dam(s) reaching minimum operating volume due to severe or extended drought, or as a result of the demand on the available supply source(s) exceeding the entitlement volume.

### Historical modelling assessment

The historical modelling undertaken (for the period 1895–2015) indicates that Leslie Dam would have reliably met a demand of 3200 ML/a for Warwick (representing council’s current allocation from Leslie Dam, and exceeding Warwick’s projected 2041 demands) without experiencing any supply shortfalls, whether water restrictions were imposed or not.

The historical modelling also showed that the supplies from Connolly Dam were less reliable than the supplies from Leslie Dam. However, for demands up to 3200 ML/a, augmentation of Warwick’s supply with a supply from Connolly Dam improved Warwick’s supply reliability, although not significantly.

### Stochastic modelling assessment

As outlined earlier, stochastic modelling accounts for a wider variation of potential climatic scenarios than the historical modelling. This makes it a useful tool for improving our understanding of the water supply system’s capability, including the likelihood of events that have not occurred during the historical period but may be possible in the future.

Figure 5 shows the indicative performance of Warwick’s water supply system under water restrictions, including the likelihoods that water restrictions could be triggered and water supply shortfalls experienced, for a range of annual water demands. The performance of Warwick’s water supply system when supply is solely from Leslie Dam is also shown in Figure 5, displayed by the dashed lines.

For example, the results of the stochastic modelling indicate that, for a water demand of 3200 ML/a with restrictions in place and using Connolly Dam to augment supplies, Warwick could experience a water supply shortfall on average about once in 4350 years. However, the performance of Warwick’s supply system was only marginally improved by supplies from Connolly Dam. Using Leslie Dam as a ‘stand-alone’ water supply source (and with restrictions in place), the modelling indicated that Warwick may experience a water supply shortfall on average about once in 4160 years for a demand of 3200 ML/a (see dashed lines in Figure 5).

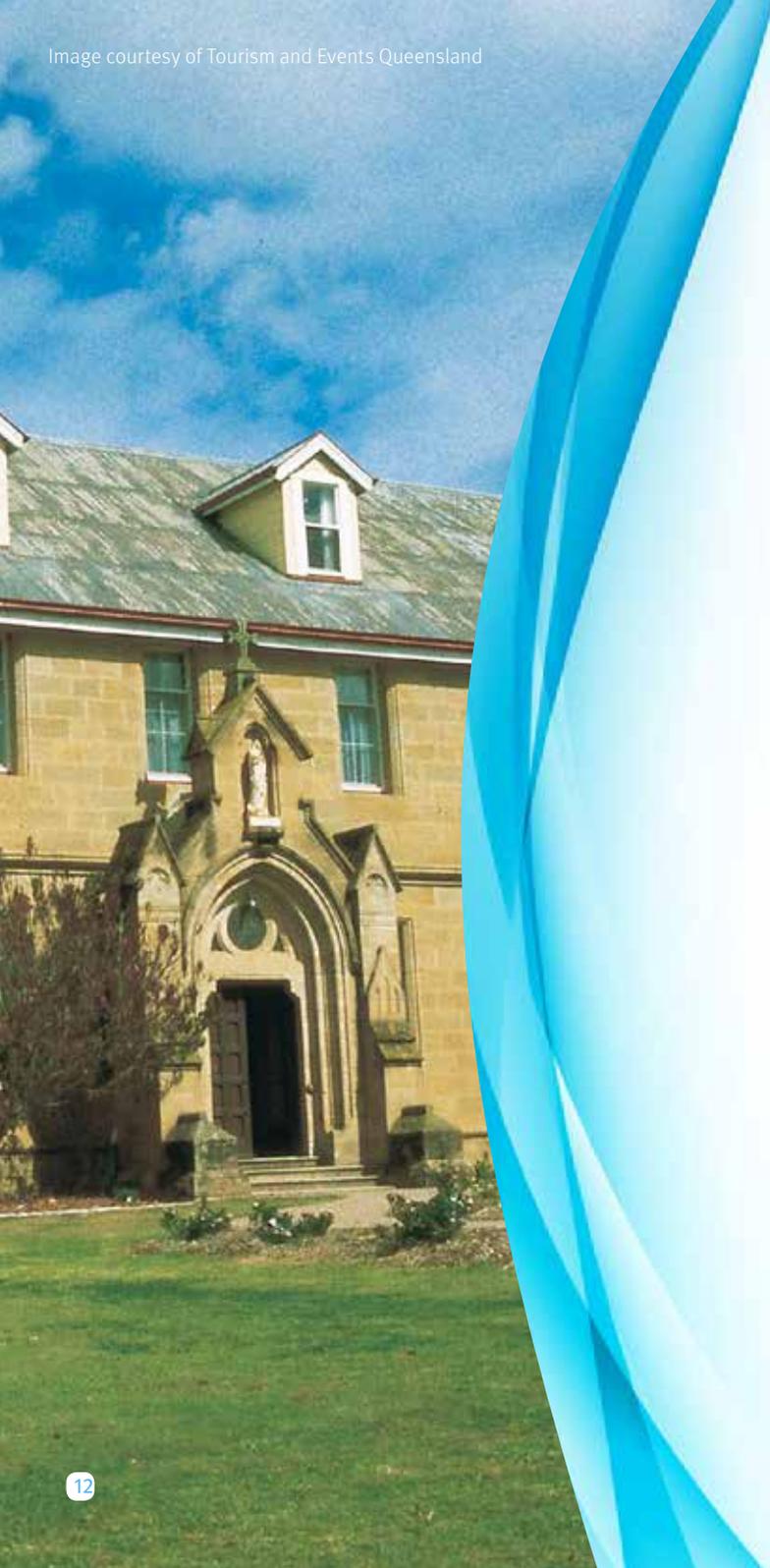
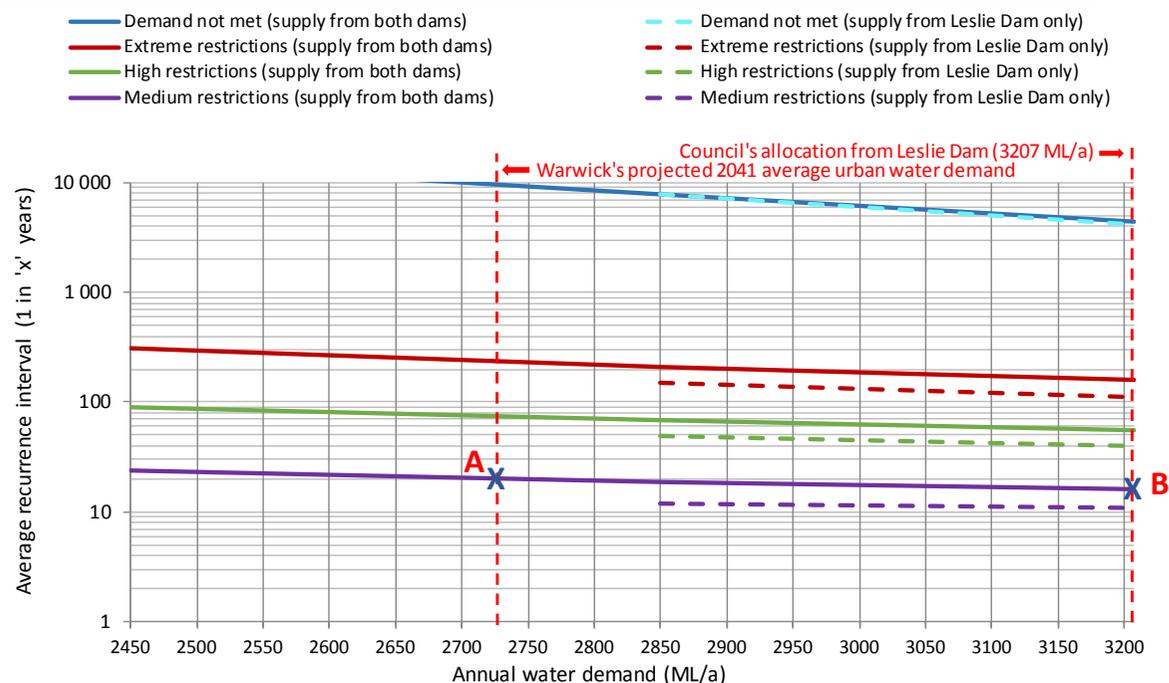


Figure 5 shows that the frequency of reaching the water restriction trigger levels increases as water demand increases. For example, at Warwick's projected 2041 average annual demand of about 2725 ML/a, 'medium' level water restrictions are estimated to occur about once every 20 years on average (see label 'A' on graph). At a demand of about 3200 ML/a, the frequency of 'medium' level restrictions increases to about once every 16 years on average (see label 'B' on graph).



**Figure 5:** Frequency of water restrictions and water supply shortfalls against total annual water demand

As stated earlier, council's current entitlement for Warwick from Leslie Dam is 3207 ML/a. To meet any demands above this volume, council is currently dependent on the availability of supplies from other sources such as Connolly Dam. However, as indicated earlier, the supplies from Connolly Dam are less reliable than the supplies from Leslie Dam and may not be available when required.

Considerations such as an acceptable frequency of the various restriction levels being applied, and the underlying likelihood of not being able to meet demand, are critical and fundamental parts of the water supply planning currently being undertaken by Southern Downs Regional Council and generally by councils across Queensland.

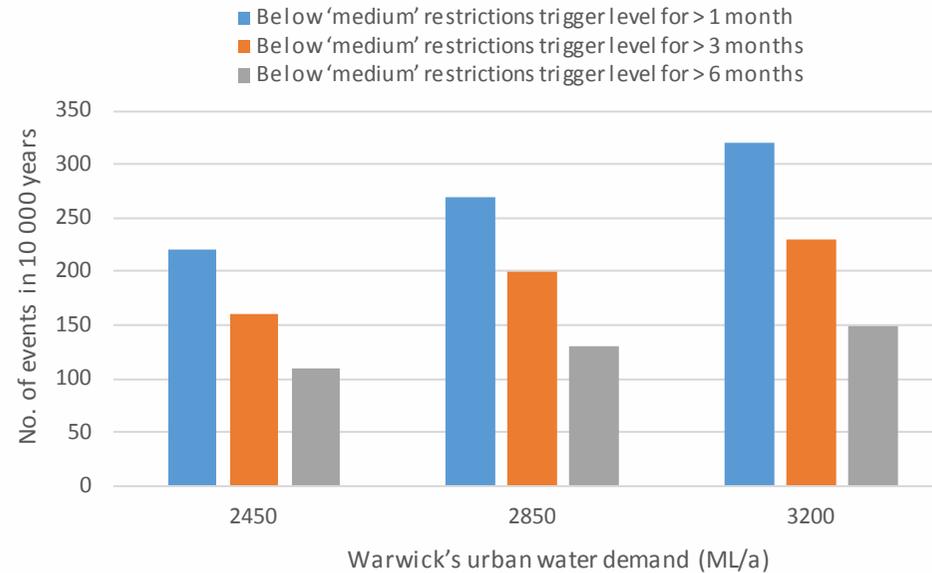
## Duration and severity of water restrictions

Although the frequency of water restrictions is an important consideration, the duration and severity of each restriction period may be more important for many water users. For example, it may be more acceptable to experience less severe and shorter periods of water restrictions more frequently, than to experience more severe and longer periods of water restrictions less frequently.

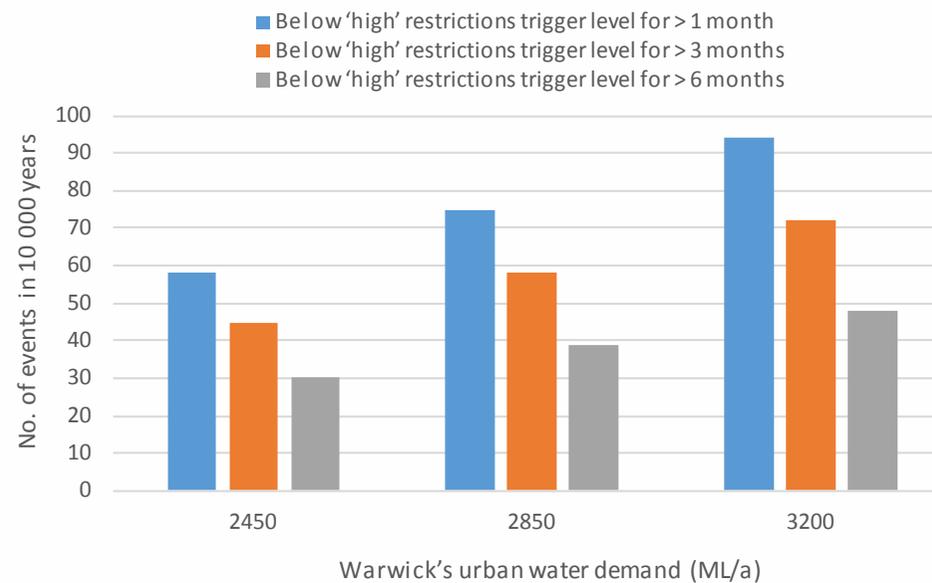
Figure 6 shows the median number of occurrences of storage volumes falling below the trigger for 'medium' water restrictions and remaining below that volume for longer than 1 month, 3 months and 6 months over a 10 000 year period, for the modelled Warwick water supply system augmented with water from Connolly Dam. Figure 6 shows that, over a 10 000 year period, at a water demand of 2450 ML/a there are 220 occurrences of the storage volumes falling below the trigger for 'medium' water restrictions and remaining below that volume for longer than 1 month, of which a significant proportion last longer than 3 months and about half last longer than 6 months. Figure 6 also shows the extent that, with an increasing level of water demand, there is an increase in the number of occurrences of water restrictions being triggered.

Figure 7 shows the number of occurrences that the storage volumes continue to fall and trigger 'high' water restrictions, and the durations that storage volumes remain below this trigger level.

Together, the frequency, severity and duration of water restrictions, along with the ability to maintain a minimum supply volume during drought, are fundamental parts of water supply planning and form part of the 'level of service'. The level of service for Warwick is a matter for council to determine, in discussion with the community.



**Figure 6:** Number and duration of events where storage volumes fall below the trigger for 'medium' level water restrictions at various annual water demands (supply from both Leslie Dam and Connolly Dam)



**Figure 7:** Number and duration of events where storage volumes fall below the trigger for 'high' level water restrictions at various annual water demands (supply from both Leslie Dam and Connolly Dam)



## Water supply system capability outcomes

Warwick's urban water demand is anticipated to increase from the current average of about 2140 ML/a to an average of about 2725 ML/a by 2041, but may be higher during prolonged hot, dry periods.

The assessment showed that Leslie Dam is able to meet Warwick's urban water requirements for demands up to council's existing allocation from Leslie Dam of 3207 ML/a with a high degree of reliability. Connolly Dam can be used to supplement water supplies to Warwick and marginally improves performance, but Connolly Dam is less reliable than Leslie Dam and in some years is unable to contribute to meeting demand.

# Moving forward

This regional water supply security assessment represents a collaborative approach between the Queensland Government and Southern Downs Regional Council to establish a shared understanding of the existing security of Warwick's water supply and its capacity to support future growth.

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Southern Downs Regional Council is committed to working in collaboration with the Warwick, Allora and Yangan communities to ensure that their water supply security needs can continue to be met into the future. Council acknowledges the need for safe and reliable water supply to residents and businesses in the local communities. Council has worked closely with the Queensland Government to collate detailed data and undertake hydrologic modelling to better comprehend the issues related to the supply of reliable water to Warwick, Allora and Yangan and to better ascertain the level of water security risk that council and the community currently face.

Warwick's primary water supply is taken directly from Leslie Dam, supplemented where needed by Connolly Dam. Leslie Dam is the main water storage for the Upper Condamine Water Supply Scheme and is managed by SunWater. For the residents of Warwick, Allora and Yangan and for irrigators within the community, the risk is that the storage will become depleted as a result of drought or extended dry periods. The risk is further exacerbated by the expected population growth in the greater Warwick community over the next decade. The historical behaviour of Leslie Dam demonstrates that the water level has fallen to relatively low levels on a number of occasions.

Council acknowledges that it has an important role to play in educating the community, businesses and the agricultural sector regarding water conservation and ensuring that the available water resources are effectively managed. When storage levels fall to a low enough level, council imposes urban water restrictions to help conserve remaining water supplies. The water restrictions target outdoor water use including irrigation of gardens and sports fields and swimming pool use. Effective water restrictions can significantly reduce the risk of water depletion and improve the long-term sustainability of the resource. Council is committed to ensuring the ongoing effectiveness of its water conservation measures, including the continued implementation of water restrictions where necessary. Further, a significant proportion of the water supplied is ultimately returned to Warwick's waste water treatment plant and is subsequently recycled. The recycled water is used for agricultural, commercial and industrial uses, which potentially reduces demand on Leslie Dam and Connolly Dam.

Detailed assessment shows that Leslie Dam is expected to be able to reliably meet Warwick's projected urban demand requirements until at least 2041, with or without supplementation from Connolly Dam. The frequency, severity and duration of water restrictions form part of a level of service council provides in collaboration with the community. The continued implementation of water restrictions where necessary and the council's commitment to recycling water will assist to secure the water supply needs of the community.

The Warwick regional water supply security assessment has been adopted by council, and the collated information will be used to inform the planning for a sustainable water supply for the community.

Council welcomes the Warwick regional water security supply assessment and the Stanthorpe regional water supply security assessment which will both provide a clearer picture of the water supply issues facing the region as a whole.

For more information on the Regional Water  
Supply Security Assessment program please visit

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