

City of Rockingham

Water Efficiency Action Plan 2016



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1. Contact details

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2. Background

2.1 Background

The City of Rockingham is located in the Swan Coastal Plain bioregion of Western Australia, approximately 40km south of Perth. The City covers approximately 260 square kilometres and is bound by the Serpentine River and the Peel Main Drain to the east and the Indian Ocean to the west. The City encompasses the following localities:

- | | |
|--------------------|--------------------|
| 1. Baldivis | 9. Port Kennedy |
| 2. Cooloongup | 10. Rockingham |
| 3. East Rockingham | 11. Safety Bay |
| 4. Garden Island | 12. Secret Harbour |
| 5. Golden Bay | 13. Shoalwater |
| 6. Hillman | 14. Singleton |
| 7. Karnup | 15. Waikiki |
| 8. Peron | 16. Warnbro |

The City is in the Mediterranean climate zone of Western Australia, with hot, dry summers and cool, wet winters. Mean daily temperatures vary from 30°C in summer to 18°C in winter. The mean annual rainfall is 788mm, with most falling from May through to October (Bureau of Meteorology).

The City's estimated resident population is 128,962 with a population density of 5.02 persons per hectare (Australian Bureau of Statistics 2015). The City's population is expected to grow beyond 175,000 in the next ten years, with residents currently employed in a variety of industries including construction, manufacturing and retail.

Potable water for the City's residents is supplied by the Water Corporation, and is sourced from dams, groundwater extraction and desalination plants. Water is collected at the three main sources and then treated. Following treatment, the water is transported to reservoirs where it is distributed through a pipe network to residential, community and industrial buildings. Potable water within the City is distributed by gravity to homes and other buildings from Tamworth Hill Reservoir in Baldivis. Water Corporation have plans to establish another reservoir to service the Karnup area when urban development reaches a level that would trigger the need for further water provision.

Groundwater in the region is comprised of unconfined, semi-confined and confined aquifers that exist as separate layered systems. The aquifers, in order of increasing depth include:

- The Superficial and Rockingham Sand Aquifers (unconfined)
- The Leederville Aquifer (semi-confined to confined)
- The Yarragadee Aquifer (confined).

In accordance with the Department of Water's groundwater abstraction licence, the City irrigates 560 hectares of parks and reserves at a standard application rate of 7500kL/hectare, equating to 4.2GL of groundwater each year.

As a growing local government, the City has increasing water demands and many residents rely on groundwater for various purposes, which presents a challenge for the City to ensure this resource is sustainably managed. Of particular importance are the many wetlands of national and international significance within the City's boundaries. Most of which are groundwater dependent, with extensive groundwater abstraction adversely impacting these sensitive environments.

In this regard, this Water Efficiency Action Plan (the Plan) provides an analysis of the City's existing and historical potable and non-potable water usage and establishes realistic measures to ensure the sustainable use and management of this important resource into the future.

2.2 Existing water efficiency programs

In June 2006, Council approved the City's involvement in the International Council for Local Environmental Initiatives (ICLEI) Water Campaign Program ('Water Campaign').

The Water Campaign progressed through five Milestones to guide participating local governments through a process of local research, policy making, action planning, implementation and evaluation. The completion of all five Milestones would result in recognition as a Waterwise Council.

Key actions undertaken in achieving all five Milestones included:

- Milestone 1: Complete an inventory of water consumption data and current practices impacting on water quality.
- Milestone 2: Review the City's water consumption and improve practices impacting on water quality.
- Milestone 3: Establish a Water Action Plan outlining current and future actions to save water and improve water quality.
- Milestone 4: Implement the Water Action Plan and quantify actions to demonstrate that Council is moving towards its goals.
- Milestone 5: Conduct a re-inventory to identify improvements that have been made since the selected base year.

In 2008, the City developed the City of Rockingham ICLEI Water Campaign™ Corporate and Community Local Action Plan ('2008 Action Plan'), and Council endorsed an updated edition of the Action Plan in March 2011 ('2011 Action Plan'). Due to the length of time since the 2011 Action Plan was last reviewed, it is unlikely that any of the actions undertaken as part of the original Water Campaign had a measurable impact on the water use consumption data contained within this Plan.

The City had completed the first four Milestones, and was working towards the completion of Milestone 5 when the Water Campaign was concluded in June 2015.

2.3 Relationship to strategic documents

This Plan endeavours to deliver the following aspirations contained within the City's Strategic Community Plan 2015-2025:

Aspiration C:	<i>Quality Leadership</i>
Strategic Objective:	<i>Infrastructure – Civic building, sporting facilities, public places and transport infrastructure planned, designed, constructed and maintained using best practice principles and life cycle cost analysis, and implemented in line with informed population growth analysis.</i>

Aspiration D:	<i>Sustainable Environment</i>
Strategic Objective:	<i>Climate Change - Planning Systems, infrastructure standards and community awareness programs that acknowledge, mitigate and adapt to the impacts of climate change.</i>

The following documents were also given particular consideration during the development of this Plan:

- City of Rockingham Groundwater Supply Operating Strategy
- Rockingham-Stakehill Groundwater Area Management Plan (Department of Water)

3. Water use inventories

The purpose of the water use inventories is to quantify water consumption across the City's corporate and community sectors. This type of baseline data identifies areas in need of improvement and allows the City to better understand the effectiveness of current management practices.

This Plan consists of two separate inventories; a corporate water use inventory and a community water use inventory. From these inventories, a comprehensive picture of water management within the City was established. The analysis was undertaken over a five year timescale to identify water usage trends since the City's 2011 Action Plan.

The City's groundwater consumption was also included in this analysis; however, community groundwater consumption data is not currently available for analysis.

3.1 Corporate water use inventory

This water consumption inventory contains data pertaining to both scheme and groundwater. All scheme water data is provided by the Water Corporation and the City records its' own groundwater data, in accordance with the licence reporting requirements prescribed by the Department of Water.

3.1.1 Historical water use - potable

The total annual water usage across all City operations has been steadily increasing over the past 15 years. The increase in total scheme water usage has coincided with an increase in population across the City, requiring an expansion in operations to cater to a larger community (Figure 1). Despite the City having its' highest water using year in 2015, the overall rate of increase in water consumption has slowed over the past five years (Figure 2; Table 1), this may partially be attributed to water efficiency actions undertaken as per the 2011 Action Plan.

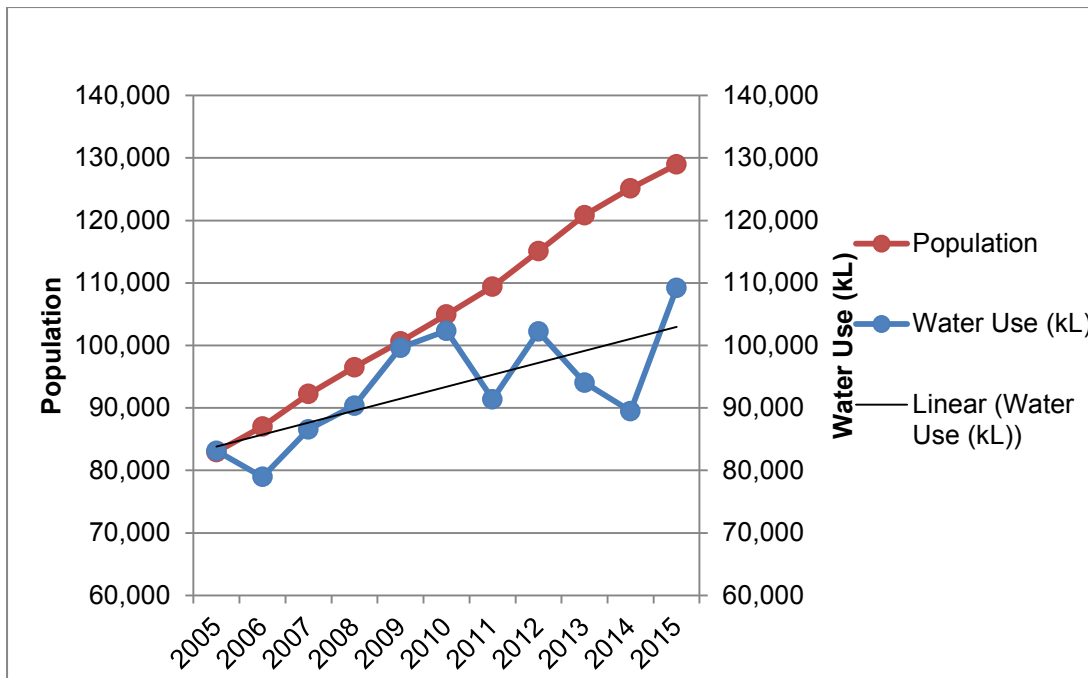


Figure 1: Estimated population in comparison to City potable water use (ABS).

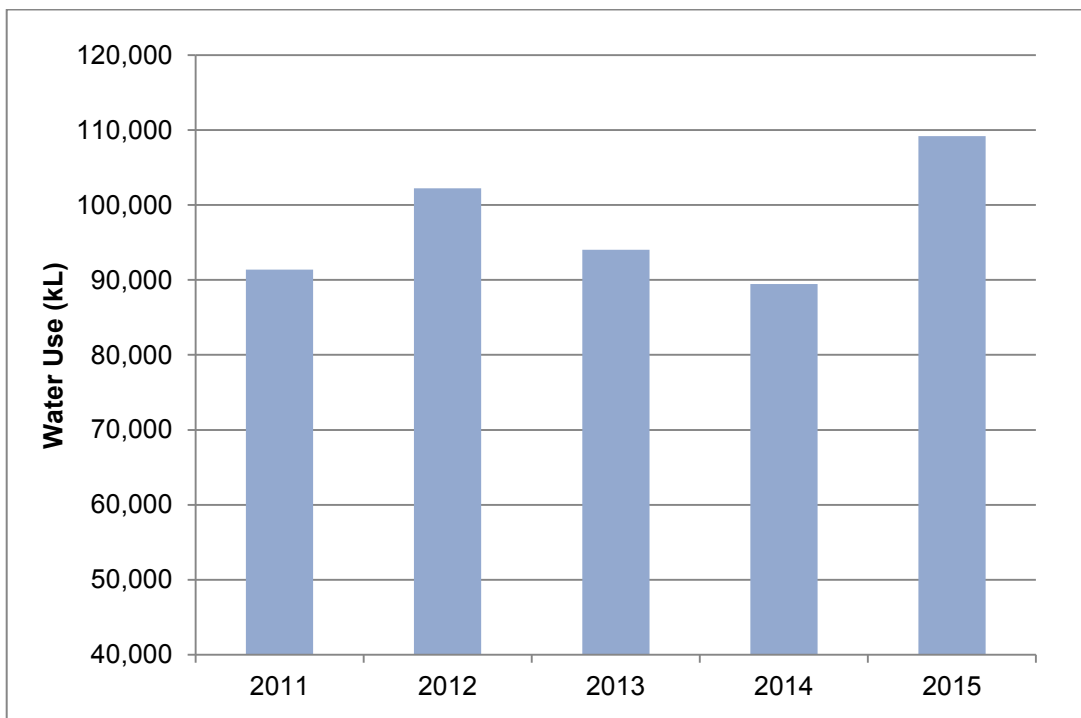


Figure 2: City historical potable water use (2011-2015)

Table 1: Historical water use (potable)

Use	2011	2012	2013	2014	2015
Annual water use (kL)	102,350	91,380	94,048	89,481	109,219
Daily water use (kL/day)	280	250	258	245	299

The breakdown for water consumption by City facilities for 2015 is shown in Figure 3. Not surprisingly, swimming pools had the highest water use with over 35,000kL being used for the City's two aquatic facilities over the course of 2015. Other high water uses include parks/reserves, centres, clubs and depots. It should be noted that 'centres' are categorised

in the data provided by the Water Corporation and include various land uses, from the Warnbro Recreation Centre to the Shoalwater/Safety Bay Foreshore.

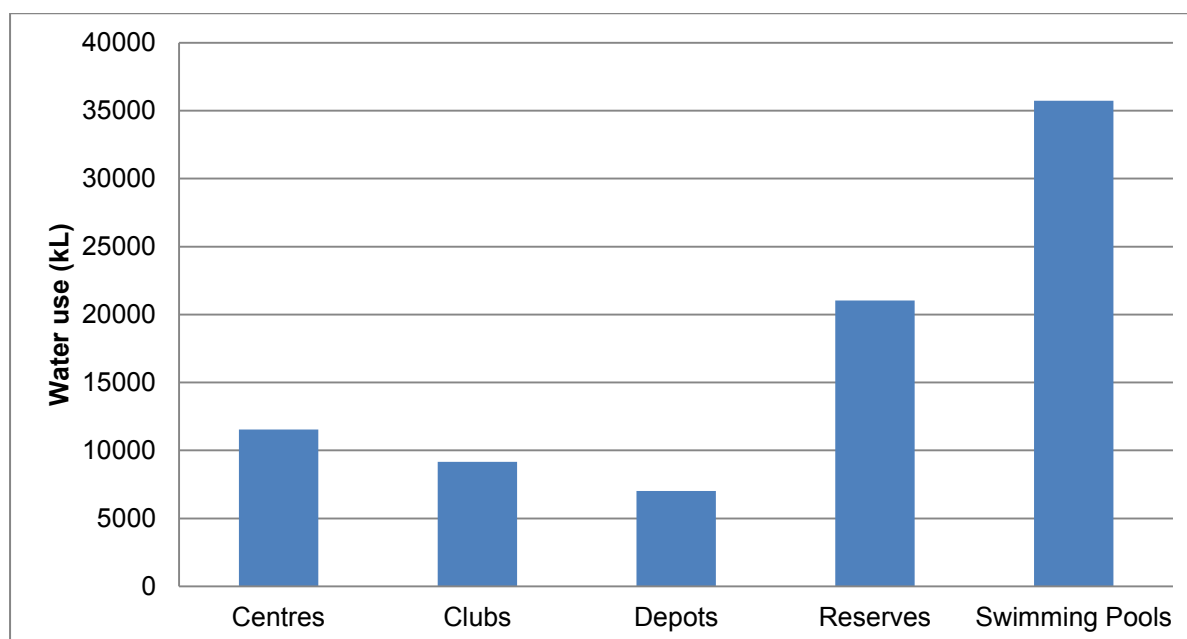


Figure 3: City potable water use profile (2015)

The City's top scheme water using sites for 2015 are shown in Table 2. The highest water consumer was the Aqua Jetty, a facility which contains five pools (combination of indoor and outdoor pools of varying sizes), a spa/sauna/steam room, a waterslide, a gymnasium and a cafe. The next highest water consuming site was Churchill Park on the Rockingham foreshore. The water using facilities in Churchill Park include a public toilet block, four outdoor showers, two drinking fountains and two taps. Other high water using sites include the Rockingham Aquatic Centre, the Point Peron Boat Ramp and the Crocker Street Depot. The City's top 5 water using sites accounted for 42% of the City's overall water consumption in 2015. Therefore, actions targeted at reducing water usage at these sites could significantly reduce the City's total potable water usage.

Table 2: Top potable water using sites (2015)

Site	2015 water use (kL)
1. Aqua Jetty	27,866
2. Churchill Park	12,970
3. Rockingham Aquatic Centre	7,857
4. Point Peron Boat Ramp	7,660
5. Crocker Street Depot	6,847

Table 3: Historical potable water use for the top 5 using sites (2011-2015) (kL)

Site	2011	2012	2013	2014	2015
1. Aqua Jetty	27,367	26,595	24,277	23,403	27,866
2. Rockingham Aquatic Centre	7,943	8,983	8,190	6,993	7,857
3. Crocker Street Depot	2,650	5,084	7,832	7,222	6,847
4. Challenger Lodge Retirement Village	5,432	5,337	6,274	5,610	6,187
5. Churchill Park	2,409	3,309	4,387	2,552	12,950

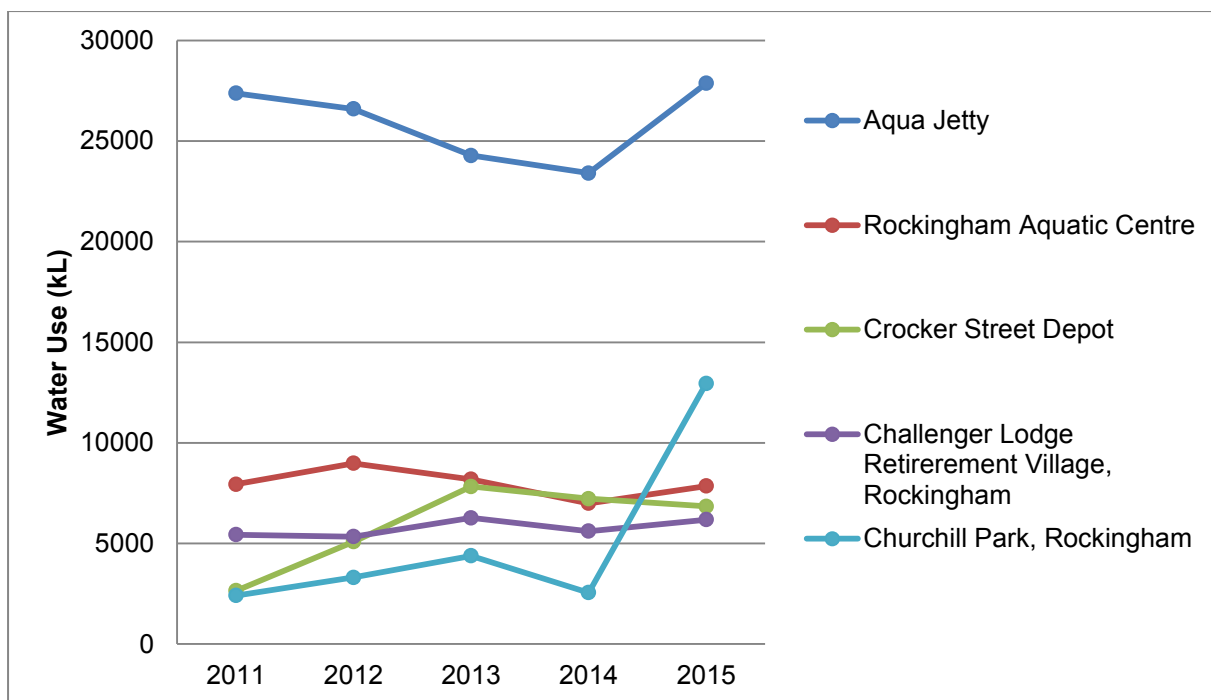


Figure 4: Historical potable water use for the top 5 using sites (2011-2015)

Historically, Churchill Park was never a major water using facility. The large increase in water usage occurred following the installation of the abovementioned public toilet and shower facilities in 2014.

3.1.2 Historical water use – non-potable

Groundwater is the only form of non-potable water that is used as a part of City operations. Irrigation meter readings have recorded usage from 2013 onwards and annual readings have been taken at the end of each financial year. Through the implementation of best practice irrigation management, the City used 528,317kL of groundwater below the Department of Water groundwater allocation for 2015/2016. The City's annual groundwater usage for the past three years is shown in Table 4.

Table 4: Historical groundwater use

Use	2013/2014	2014/2015	2015/2016
Annual water use (kL)	3,090,685	3,786,213	3,719,457
Daily water use (kL/day)	8,468	10,238	10,190

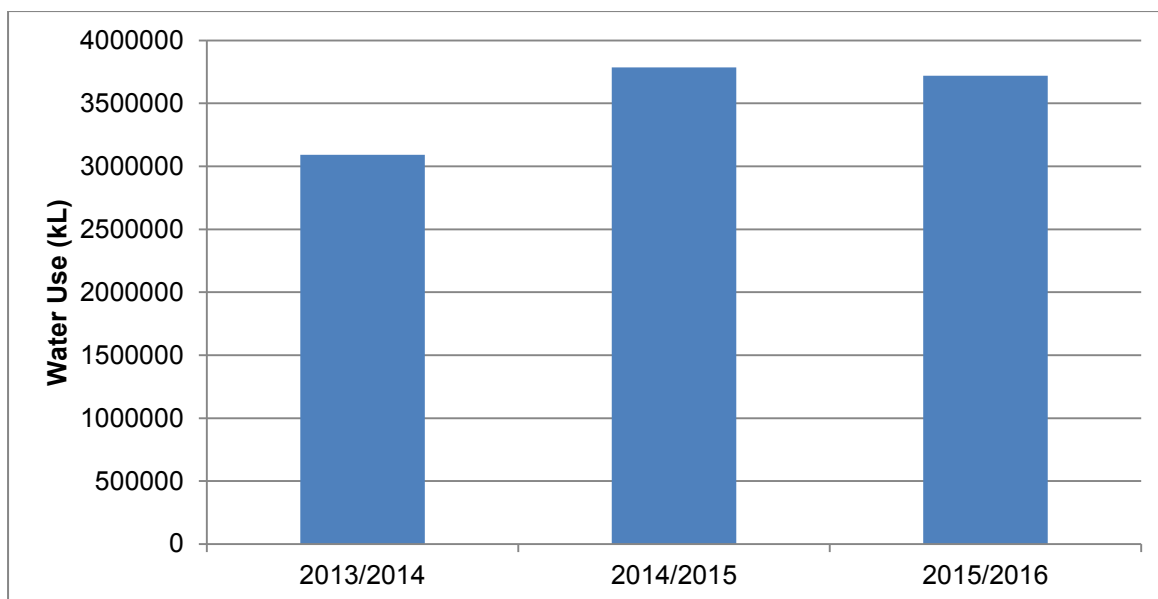


Figure 5: City historical groundwater use (2013-2016)

Table 5 indicates that Lark Hill Sports Complex is the highest water using reserve in the City. Lark Hill contains 37.2 hectares of irrigated playing fields and is located on Warnbro Sound Avenue in Port Kennedy. The complex provides ovals for a multitude of sports, extensive outdoor multi-use playing areas and social facilities. The top five water using sites accounted for only 14% of the City's overall groundwater usage in 2015/2016, with the remaining groundwater use distributed across the City's many irrigated parks and reserves.

Table 5: Historical groundwater use for top 5 water using sites (kL)

Site name	2013/2014	2014/2015	2015/2016
1. Larkhill Sports Complex, Port Kennedy	142,524	153,811	144,344
2. St Raphael Reserve, Port Kennedy	64,784	101,506	120,010
3. Harrington Gardens, Waikiki	82,583	99,707	117,223
4. Stan Twight Reserve, Rockingham	56,931	89,797	80,212
5. Tamworth Reserve, Baldivis	93,628	41,541	71,228

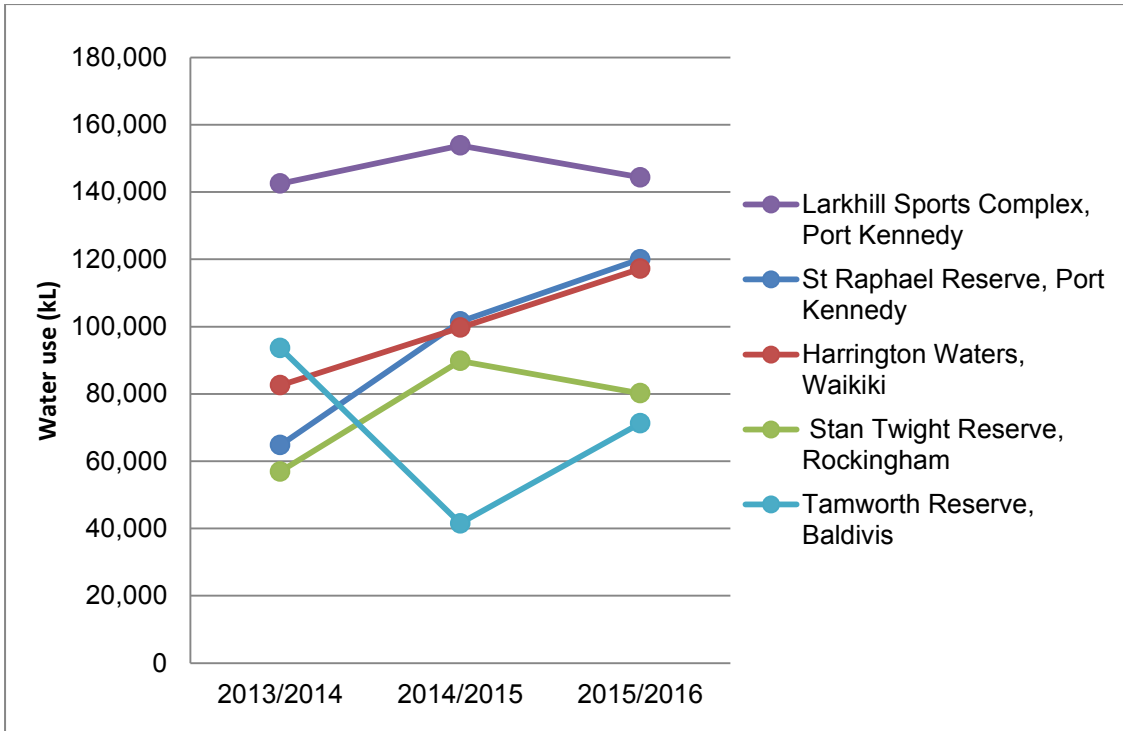


Figure 6: Historical groundwater use for the top 5 using sites

3.2 Community water use inventory

The community water use inventory identifies the amount of water being used by the residential and commercial (business and industrial) sectors. This data has been provided by the Water Corporation and includes total water use for various sectors of the community, including high and low density residential, manufacturing and construction. This usage is shown in Figure 7 and indicates that community water usage has been increasing each year in the City. This is to be expected as the number of residential properties increases according to population growth.

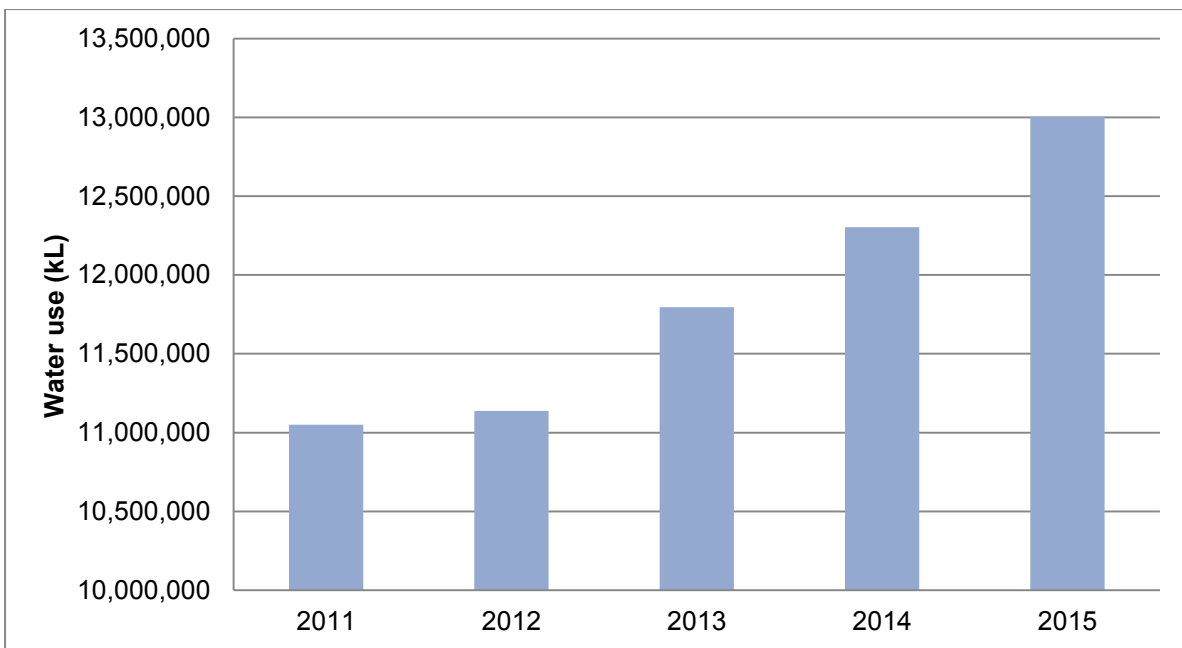


Figure 7: Community historical water use

At 80%, the highest community water consumption was attributed to low density residential housing, with the manufacturing and construction sector the second highest consumer at 4% (Figure 8). High density residential housing made up for 3% of the total community consumption and the remaining land uses were combined into the 'Other' category, which included wholesale trade, government and defence as well as the business and finance sector.

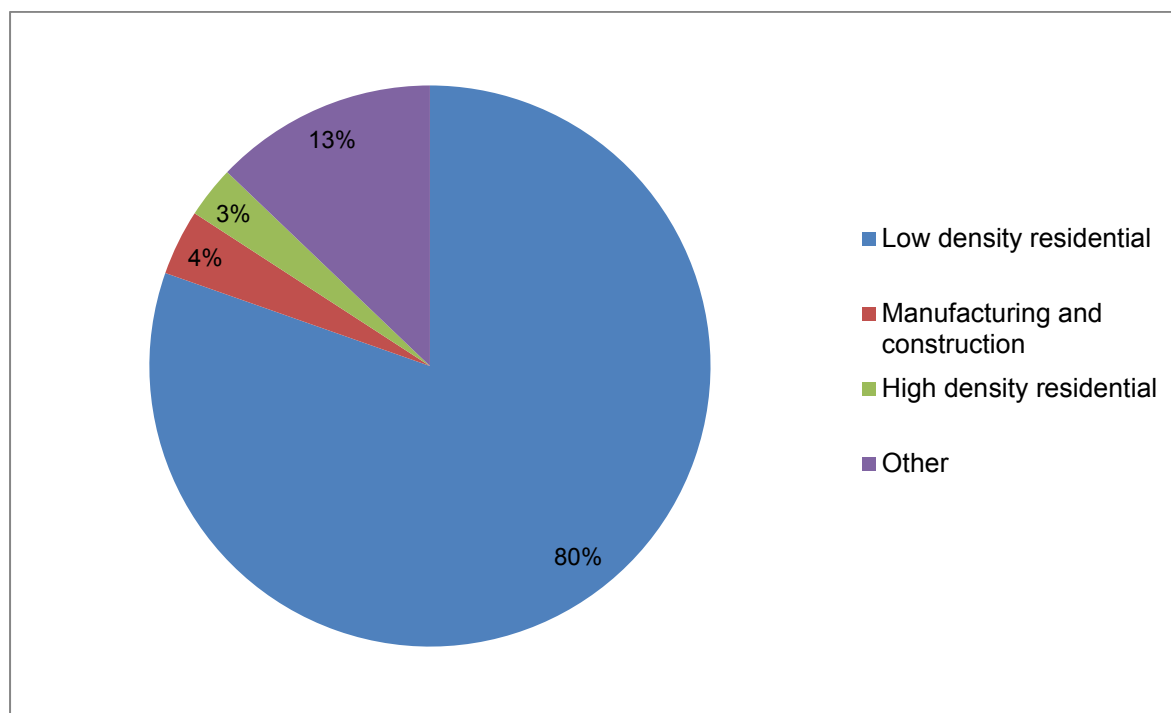


Figure 8: Community water use by sector (2015)

While the total kilolitre measurement indicates an increase in residential water consumption, it is imperative to analyse usage data on a per capita basis to accurately determine water consumption trends with respect to population growth. In this regard, the overall per capita water use has remained relatively constant since 2009 (Table 6).

Table 6: Per capita scheme water use

	2009	2010	2011	2012	2013	2014	2015
Per capita water use (kL)	84	87	83	80	81	82	84

The inventory also allows community water consumption to be divided into non-residential and residential use. Table 7 below outlines the non-residential scheme water use in 2015 for each suburb.

Table 7: Non-residential scheme water use (2015).

Non-residential				
Suburb	Number of water accounts in 2015	Consumption (kL)	Percentage of total consumption	Average per property (kL)
Baldivis	642	122,361	9%	191
Cooloongup	30	74,729	6%	2491
East Rockingham	44	84,066	6%	1911
Golden Bay	222	19,927	1%	90
Hillman	3	3,128	<1%	1043
Karnup	197	147	<1%	<1

Peron	5	266,505	20%	53,301
Port Kennedy	152	106,877	8%	703
Rockingham	572	430,334	32%	752
Safety Bay	56	26,142	2%	467
Secret Harbour	98	37,974	3%	387
Shoalwater	60	23,606	2%	393
Singleton	59	6,940	1%	118
Waikiki	68	36,167	3%	532
Warnbro	49	96,240	7%	1964

Interestingly, the suburb of Peron contains only five water accounts but accounted for almost 20% of the total water consumption, associated with various government usages such as the Waste Water Treatment Plant.

A breakdown of overall water consumption in the City is provided in Figure 9. At 77%, the majority of water consumption within the City is attributed to the community, as opposed to City operations and facilities. This highlights the importance of community engagement actions targeted at reducing household water use in residential areas. Potable water usage for City operations only makes up for 1% of the overall water consumption across the inventories. It should be noted that this graph does not take into account additional non-potable water use by the community.

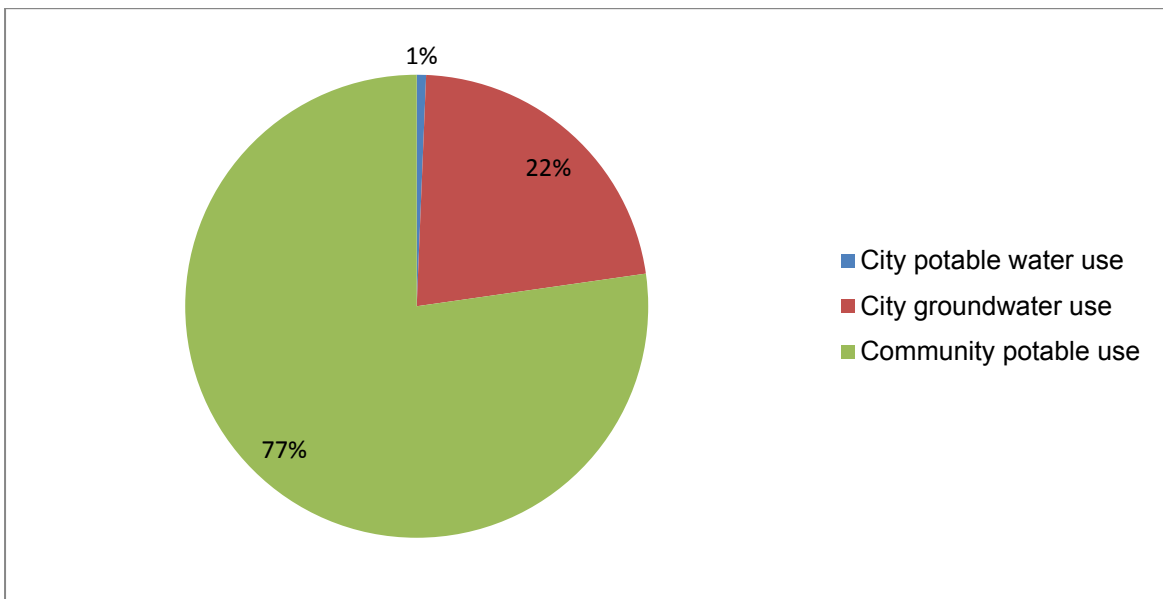


Figure 9: Overall water use by inventory

4. Water efficiency goals and benchmarks

The City's water efficiency goals aim to deliver both water conservation and water quality objectives. These goals are derived from analysis of the aforementioned inventories and will drive the implementation of best practice water management across corporate operations and in the community.

4.1 Review of previous water efficiency goals

Corporate and community water conservation goals were previously established as part of the 2011 Action Plan and aimed to:

- Reduce corporate water consumption by 30% below 2004/2005 levels by the year 2012/2013; and
- Reduce community water consumption by 30% below 2004/2005 levels by the year 2012/2013.

Table 8 indicates that the City's water usage actually increased by 10% over the target time period. As a result of considerable population growth and urban development, it was infeasible for the City to reduce corporate water consumption by 30%, during a time when operations were expanding to meet the needs of a growing community.

Notwithstanding, there has been a significant reduction in water usage per capita, highlighting that water conservation initiatives previously implemented by the City may have been effective to some extent.

Table 8: Performance of previous water efficiency goals (2011)

Year	Target water use	Water use	Target change (%)	Change (%)	Population	Population change	Water usage per population
2004	N/A	85,744 kL	30% reduction	N/A	79,252	N/A	1.08kL
2013	60,020kL	94,048kL	30% reduction	10% increase	120,847	52% increase	0.78kL

Ultimately, the aspirations set in 2011 were unrealistic. Moving forward, the goals established in this Plan are ambitious yet pragmatic and will enable the delivery of best practice water efficiency management across City operations relative to a growing community. To achieve this, future goals will be based on per capita measurements to ensure water usage analysis effectively considers population growth.

4.2 Water efficiency goals

4.2.1 Corporate potable water efficiency goal

The Department of Water's Water for Growth (Urban) document examines the water demand and supplies for Western Australia's cities, towns and localities, both now and 35 years into the future. The outlook examines current and future urban water demand and supplies based on drivers such as population growth and a drying climate. The Water for Growth Plan has set a target to achieve a 15% reduction in local government water use by 2030. Such a reduction is not feasible for a local government which will have to expand its operations to meet the demands of a growing population. In this regard, with 2015 as the base year, the City's corporate potable water use goal is to:

Reduce corporate potable water consumption by 15% per capita by the end of 2030.

This equates to the City reducing its consumption from approximately 850L to 720L per resident by 2030. The City's population is forecast to increase by 72% in the next 15 years. If population predictions are met, achieving the above goal will not result in a reduction in gross potable water consumption, however, the usage per resident will be less.

4.2.2 Corporate groundwater efficiency goal

Groundwater abstraction licenses are issued by the Department of Water under the *Rights in Water and Irrigation Act 1914* and the City's groundwater allocations are stipulated in the Rockingham-Stakehill Groundwater Management Plan (Department of Water). To ensure that allocations are not exceeded, the City has developed a water budget for all irrigated open spaces. Furthermore, with 2015 as the base year, the City's groundwater efficiency goal is to:

Reduce the City's groundwater consumption by up to 10% based on the Department of Water standard groundwater allowance of 7500kL/hectare.

4.2.3 Community water efficiency goal

Achievement of the community water efficiency goal is to be approached differently as usage is not under the direct control of the City. Any measures undertaken by the City to reduce community consumption will be dependent on the City's ability to encourage better community usage practices.

As a part of its' Water Forever Plan, the Water Corporation has set a goal to reduce water use in Perth by 15% by 2030 and by 25% by 2060. The City's residential per capita consumption of scheme water is currently sitting at 84.05kL annually, already 33% less than the State average. However, the City will still endeavour to encourage the community to reduce residential water consumption and help relieve the pressure on the State's potable water resources.

As such, using the base year of 2015, the community water conservation goal is to:

Reduce community water consumption by 15% per capita by 2030 and by 25% per capita by 2060.

This results in a 13kL per capita reduction by 2030 and a 21kL per capita reduction by 2060.

4.3 Performance Benchmarks

Performance indicators have been calculated to determine the benchmark for high water using sites for the 2015 base year. This will enable water use comparisons to be made each year.

Table 9: Performance Benchmarks

Facility or irrigated area (parkland)	Year	Water used (kL)	Benchmark indicator	Performance indicator	Benchmark
Aqua Jetty	2015	27,866	L/patron	728,367 patrons	$27,866/728,367 = 38\text{L/patron}$
Churchill Park, Rockingham	2015	12,970	kL/hectare	2.8977ha	$12,970/2.8977 = 4,476\text{kL/hectare}$
Rockingham Aquatic Centre	2015	7,857	L/patron	142,093 patrons	$7,857/142,093 = 55\text{L/patron}$
Point Peron Boat Ramp	2015	7,660	N/A	N/A	N/A
Crocker Street Depot	2015	6,847	kL/employee/year	149 employees	$6,847/149 = 46\text{kL/employee}$
Lark Hill Sports Complex	2015/2016	144,344	kL/hectare	32.7ha	7,500kL/hectare
St Raphael Reserve	2015/2016	120,010	kL/hectare	8ha	7,500kL/hectare
Harrington Gardens	2015/2016	117,223	kL/hectare	6.46ha	7,500kL/hectare
Stan Twight Reserve	2015/2016	80,212	kL/hectare	8.2ha	7,500kL/hectare
Tamworth Reserve	2015/2016	71,228	kL/hectare	8ha	7,500kL/hectare

It is important to note that a benchmark indicator for Point Peron Boat Ramp was not applicable due to the variety of different water uses on the site. The boat ramp includes wash down facilities, a public function centre, a public toilet and a fish cleaning station.

It should also be noted that the benchmark for groundwater usage for individual reserves cannot be accurately calculated based on kL/hectare as the standard allowance of 7,500kL/hectare applies across multiple sites in accordance with the respective groundwater abstraction licenses.

5. Table of actions

5.1 Proposed water efficiency actions

To be considered for recognition as a Waterwise Council, the City is required to demonstrate its progress towards Actions 1-3 of the Memorandum of Understanding, including demonstrated completion of Waterwise training provided by the Water Corporation, including Waterwise Auditing and Waterwise Gardening and Irrigation, for all relevant staff.

The following proposed water management actions are to be implemented over a five year time period.

Table 10: Corporate Water Efficiency Table of Actions.

Water saving area	Ref	Action/initiative	Status	Proposed completion date	Department/officer responsible	Commentary	Evidence required
Facilities	1	Conduct a water audit on each of the City's top water using sites	To be completed	Annually	Asset Services Parks Services	N/A	Copy of water audit report
	2	Commit to implementing the most viable recommendations from water audits undertaken	To be completed	As required	Asset Services Parks Services	N/A	Actions listed in action plan
	3	Procurement processes incorporate consideration of better than 3 star WELS rated fixtures	To be completed	As required	Environmental Planning Officer	N/A	Copy of policy or procedure
	4	5-Star WELS rated water efficient devices, fixtures and fittings are installed in any new City facilities or retrofitted in existing facilities	Completed	As required	Asset Services	N/A	Proof of purchase

	5	Council owned facilities are participating in Waterwise programs e.g. Waterwise Golf Course or Waterwise Aquatic Centre Program	There is an existing Water Efficiency Action Plan for the Aqua Jetty	Completed	Environmental Planning Officer	N/A	Endorsed Waterwise facility 'Aqua Jetty'
	6	Alternative water sources are used to supply facilities	Completed	Review as required	Asset Services	Millar Road Landfill uses treated bore water	Photographs
Education	7	Appropriate staff have completed Waterwise training.	To be completed	2016/17 financial year	Water Management Team	N/A	List of Council attendees that have completed the training
	8	Further training required to be considered for Gold Waterwise Council Status	To be completed	2016/17 financial year	Water Management Team	N/A	List of Council attendees that have completed the training
	9	Processes in place to achieve behavioural change within the City, e.g. leak reporting process established and water conservation signage in staff facilities, water management team meetings held on a regular basis	Reviewed annually	2016/17 financial year	Environmental Planning Officer Asset Services	N/A	Copy of policy or procedure
Monitoring	10	Meters (and any sub-meters) are read on a regular basis and recorded	Recorded monthly	November 2017	Asset Services Irrigation Supervisor	N/A	Completed meter reading templates

	11	Leak detection is included in inspections and reported on or repaired if a leak is observed	To be completed	2016/17 financial year	Asset Services	N/A	Completed meter reading templates
	12	Meter all bores – install a water meter to the standards detailed in the Department of Water <i>Guidelines for water meter installation 2009</i> , on all non-scheme water sources to measure both water flow rate and cumulative volume	Completed	Review as required	Irrigation Supervisor	N/A	Completed meter reading templates
Irrigation Practices	13	Create/maintain a water budget for City open spaces. Each area of irrigated parkland to have base annual water budget. Scheduling should be on a monthly basis and tracked against the water budget	Completed	Review as required	Irrigation Supervisor	N/A	Copy of water budget
	14	Audit of irrigation system to identify poorly performing irrigation hardware	Reported annually	October – November 2016	Irrigation Supervisor	N/A	Copy of audit report
	15	Develop a system maintenance and audit schedule. Keep replacement and repair parts consistent and available to maintain irrigation system performance	Completed	Review as required	Irrigation Supervisor	N/A	Copy of maintenance and audit schedule

	16	Use of technology to actively monitor water use, e.g. central controlled irrigation systems with weather control, soil moisture sensors	To be completed	2016/17 financial year	Irrigation Supervisor	Weather stations have been installed, not yet connect to the irrigation system	Photographs
	17	Employ cultivation techniques such as aeration, soil wetting agents, soil amendment, vertical mowing, and spiking to reduce compaction and allow penetration. Estimate the water holding capacity of the soil from sample cores	Completed	Review as required	Irrigation Supervisor	N/A	Copy of meter readings/proof of purchase/irrigation, landscape or fertiliser application plans.
Irrigation and Landscape Design	18	Landscaping plans to include low water use plants, hydrozoning and soil amendments	Completed	Review as required	Parks Services Land and Development Infrastructure	N/A	Copy of landscaping plans
	19	Develop a Local Planning Policy to implement Water Sensitive Urban Design into new land developments	To be completed	2016/17	Urban Water Assessment Officer	Currently have a Planning Procedure (1.8)	Copy of policy

Table 11: Community Water Efficiency Table of Actions.

Water saving area	Ref	Action/initiative	Status	Proposed completion date	Department/officer responsible	Commentary	Evidence required
Engagement	20	Engage with household and business ratepayers to promote water efficiency	Completed	Review as required	Environmental Planning Officer Community Development Officer	Water efficiency information available from the City's website. Information on the City's participation in the Waterwise Councils Program will be added to the website	Website URL
	21	Engage with local schools on water efficiency and sustainability programs	Completed	Undertaken annually	Environmental Planning Officer Community Development Officer	The City will promote the Waterwise Schools program to local schools	Example of program
	22	Promote Waterwise gardening techniques to the City's residents	Completed	December 2016	Environmental Planning Officer Community Development Officer	Beyond Gardens and Great Gardens workshops are undertaken annually	Example of engagement e.g. newsletters, events
	23	Encourage local community to utilise Waterwise Specialists	Completed	Review as required	Environmental Planning Officer Community Development Officer	Waterwise gardening workshops. Volunteer taskforces	Example of engagement e.g. newsletters, events

Water sources (recycling/non potable)	24	Provide information on the installation and local regulation of grey water systems and rainwater tanks where appropriate	Information packs distributed annually	Review as required	Environmental Planning Officer Community Development Health Services	N/A	Copies of information provided
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Note: Gold reference numbers relate to addition action undertaken aimed at achieving 'Gold Waterwise Council' status.

5.2 Commitment to monitoring and review

The City of Rockingham Water Efficiency Action Plan is intended to be a dynamic document that can be altered to the City's needs. In order to ensure that this document remains relevant, commitment to a monitoring and review process is essential. Review of the Plan allows for the incorporation of new technologies and initiatives to facilitate the implementation of priority management actions.

An annual review of the Plan is to be completed by the end of each financial year to determine the progress towards reaching the target goals. The report will be submitted to the Water Corporation and the Department of Water and will provide evidence of work undertaken in the community or in City operations to reduce water use. The review is also intended to provide examples of water efficiency actions and initiatives that could be employed by other Local Governments. Evidence confirming that the City has incurred no breaches in scheme or groundwater usage during the year will also be included as an addendum to the report.

This annual review could form part of a larger five yearly report for the Waterwise Council Program and detail the progress of the Program, overall water use reductions and the associated financial costs and savings.