



CITY OF CAPE TOWN
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City of Cape Town

Annual Water Services Development Plan Performance- and Water Services Audit Report

As directed by the Water Services Act (Act 108 of 1997) and the Regulations relating to Compulsory National Standards and Measures to Conserve Water.

FY 2016/17

Version and Approval Record

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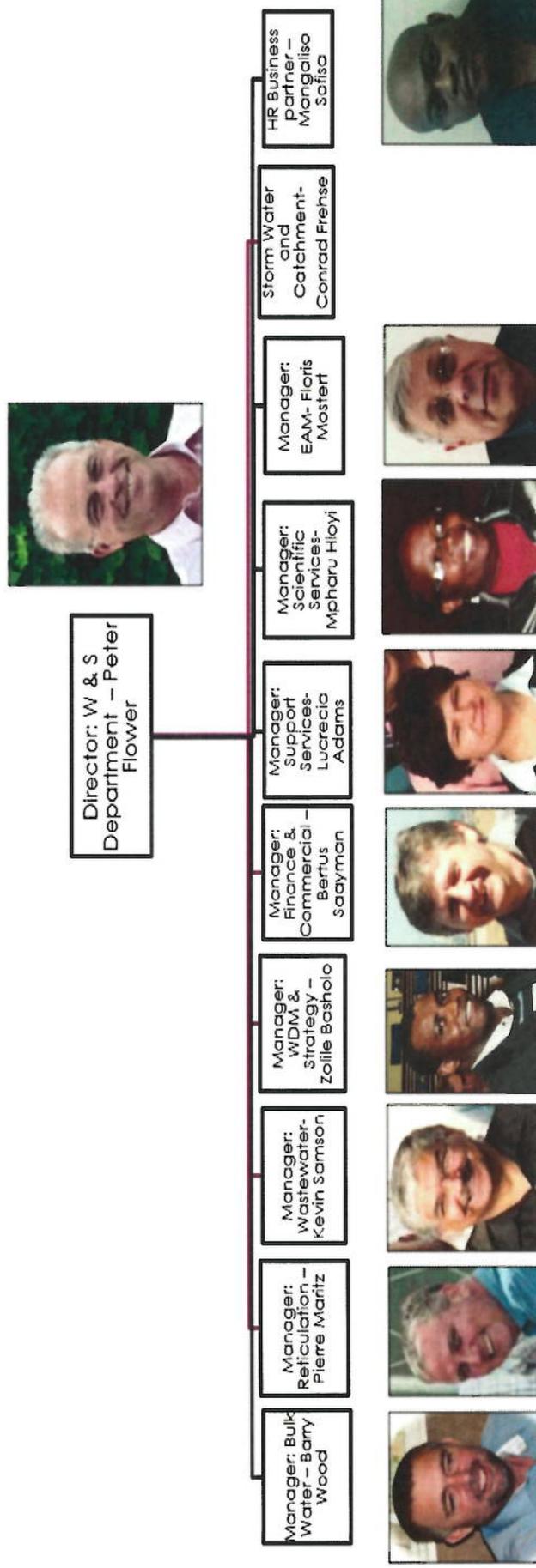
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Water and Sanitation department organogram

Senior Management



Foreword

This report is submitted in fulfilment of the requirements stated in the Water Services Act, 1997 (Act No. 108 of 1997), as well as the “Regulations relating to compulsory national standards and measures to conserve water”, as issued in terms of sections 9 (1) and 73 (1) (j) of the Water Services Act, 1997, to report on the implementation of its water services development plan during each financial year and to include a water services audit in this annual report.

The Water and Sanitation Department of the Cape Town Municipality remains committed to the provision of safe and reliable basic services to all residents. The Department has made significant progress in providing water and sanitation services to all City of Cape Town (CCT) residents since the formation of one Metro administration.

Whilst all residents are adequately serviced to the national minimum standard, the services within informal settlement areas are continually being improved. Such improvement is centred on how CCT can continue to overcome where possible the unique technical, density, social, political and land challenges which mostly have legal implications. These processes are led by the Informal Settlements and Backyarders Department.

The principal challenge for the Department is to maintain an existing water and sanitation service for the city while also providing services for an ever-increasing number of households in a sustainable way. This has to be achieved in the context of providing for basic needs, ensuring economic growth, maintaining an ageing infrastructure, limiting negative environmental impact, managing water resource scarcity and consolidating a transformed metro administrative infrastructure.

To ensure sustainable, fair, equitable, reliable and financially viable provision of water and sanitation services, the Department has developed and is implementing strategies that address the priorities reflected in the scorecard, represented by the Service Delivery and Budget Implementation Plan (SDBIP), to ensure effective water services management. The strategies also seek to ensure compliance with the National Water Act, Water Services Act and the related regulations, National and City Policies.

The City has concluded the Organisational Development and Transformation Plan (ODTP) process and has implemented the changes. The new City structure has a very strong focus on localised service delivery along 11 Transformational Priorities. The impact on the WSA and the Water & Sanitation Department, in summary, consist of dividing the City into four operational areas rather than the Department’s previous 8, the creation of a separate but sister Department Informal Settlement & Backyarders Department within the renamed Informal Settlement, Water & Waste Services Directorate (ISWSS), and lastly moving the branch "Catchment & Stormwater Management" away from Transport and into our Department, to support a new Water-Sensitive strategy optimally protecting the water catchments and making best use of stormwater. Organogram of the Water and Sanitation department senior management is shown above.

Due to the challenging and ever-changing complex urban environment, the city will implement its mandate via 11 directorates and 4 Areas.

The ODTP will be driven by the following 11 Transformational Priorities:

- Excellence in basic service delivery
- Mainstreaming basic service delivery to informal settlements and backyard dwellers
- Safe communities
- Dense and transit oriented urban growth and development
- An efficient, integrated transport system
- Leveraging technology for progress
- Positioning Cape Town as a forward-looking, globally competitive business City

- Resource efficiency and security
- Building integrated communities
- Economic Inclusion
- Operational sustainability

Abbreviations and Definitions

BDS:	Blue Drop Certification System
DWS:	National Department of Water and Sanitation
FY:	Financial Year - means in relation to – <ul style="list-style-type: none"> • a national or provincial department, the year ending 31 March; or • a municipality, the year ending 30 June.
GDS:	Green Drop Certification System
IDP:	Integrated Development Plan - An IDP is a legislative requirement for municipalities which identifies the municipality's key development priorities; formulates a clear vision, mission and values; formulates appropriate strategies; shows the appropriate organisational structure and systems to realise the vision and the mission and aligns resources with the development priorities.
ISWSS:	Informal Settlement, Water & Waste Services Directorate
MFMA:	Local Government: Municipal Finance Management Act, 2003 (Act No. 56 of 2003)
m ³	cubic metres = 1 000 liter = 1 kiloliter
MI	Megaliter = 1 000 kiloliter = 1 000 000 liter
ODTP:	Organisational Development and Transformation Plan
SDBIP:	Service Delivery Budget Implementation Plan – is a management, implementation and monitoring tool that enable the Municipal Manager to monitor the performance of senior managers, the Mayor to monitor the performance of the Municipal Manager, and for the community to monitor the performance of the municipality.
WSA:	Water Services Authority - means a municipality with the executive authority and the right to administer water services as authorised in terms of the Municipal Structures Act, 1998 (Act No. 117 of 1998)
WSDP:	Water Services Development Plan – means the plan to be developed and adopted by the WSA in terms of the Water Services Act, 1997 (Act No. 108 of 1997)
WSDP Guide Framework:	Modular tool which has been developed by the DWS to support Water Services Authorities in complying to the Water Services Act with respect to Water Services Development Planning and which is also used by the DWS to regulate such compliance
WSP:	Water Services Provider - means any person or institution who provides water services to consumers or to another water services institution, but does not include a water services intermediary

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Section A: Water Services Authority Profile

A1: Map of Water Services Authority Area of Jurisdiction

The City of Cape Town Metropolitan Municipality services an area covering 2455 km² in the Western Cape. The City of Cape Town is comprised of 24 sub- councils and then further divided into 111 geographic areas called wards to effectively manage service delivery to the whole city.

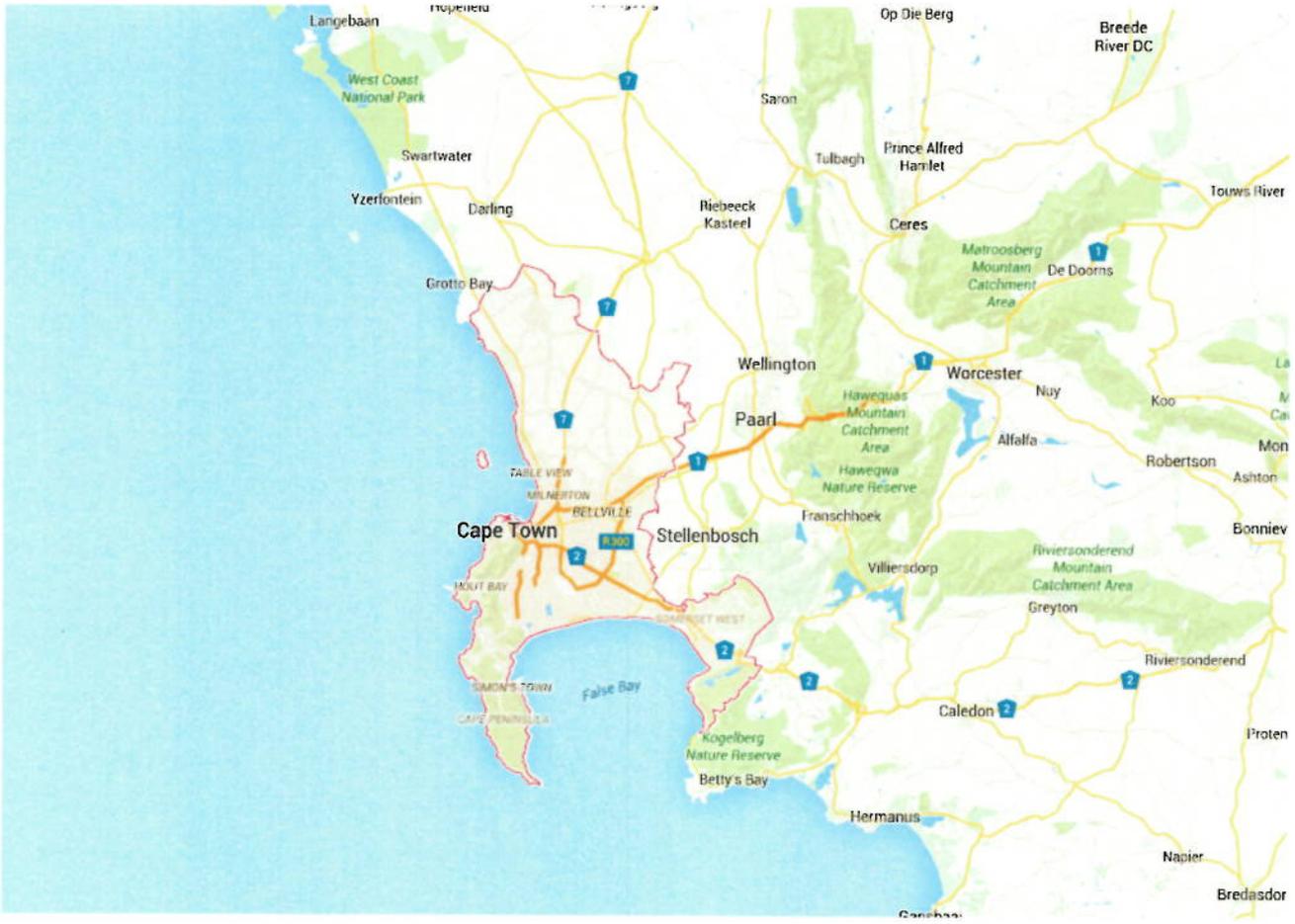


Figure A1. 1: Location of WSA within DM/ Province

The City of Cape Town Municipality is relatively densely populated with approximately 1619 people per km². It houses the legislative capital of South Africa and accounts for more than 50% of the Western Cape’s economic activity.

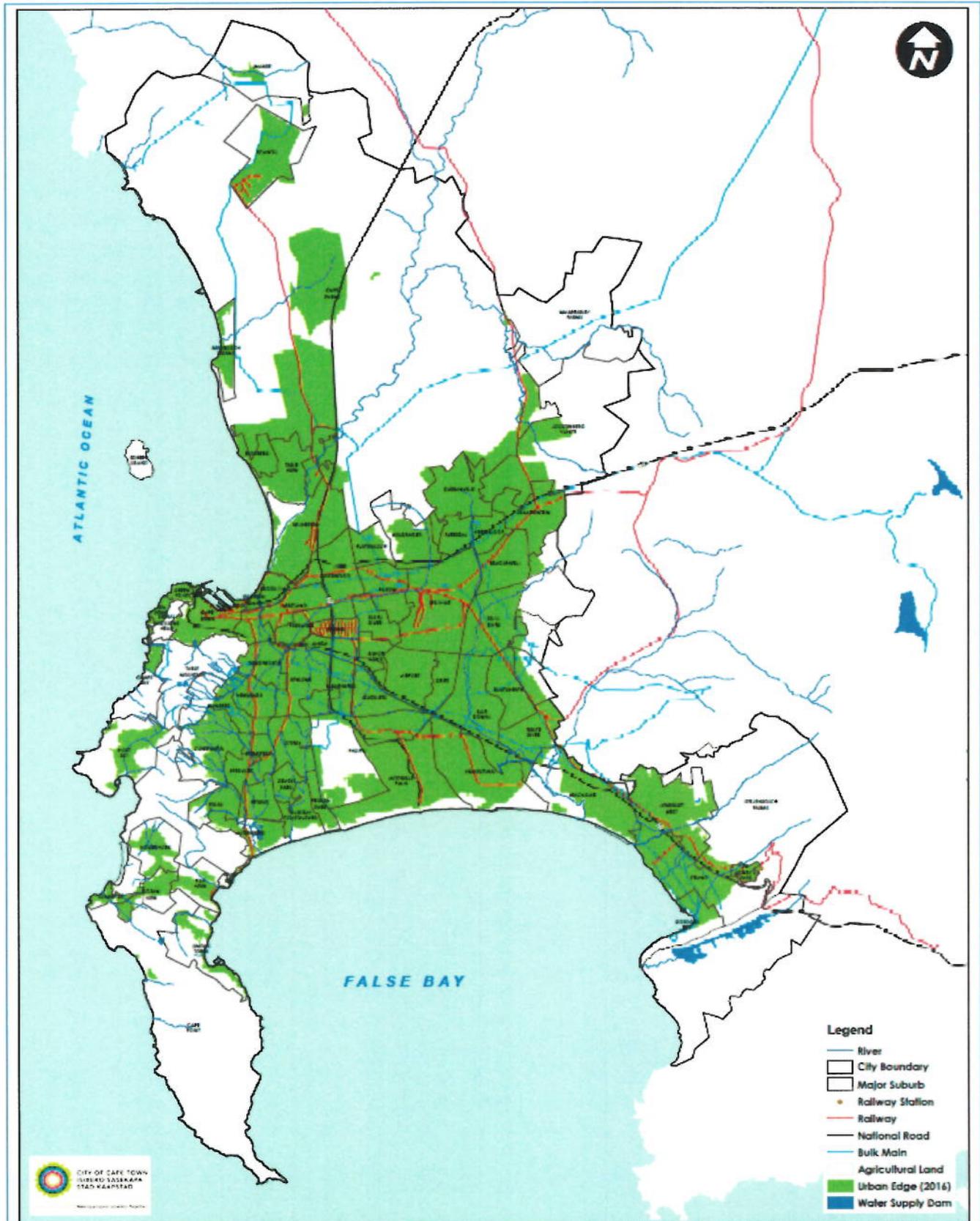


Figure A1. 2: Map of WSA area of jurisdiction

A2: Water services administration and organization

The relevant officials responsible for water services provision within the City of Cape Town Metropolitan Municipality are outlined below.

Table A2.1: Water services administrative structure

Accounting Officer	
Designation:	City Manager
Name:	Achmat Ebrahim
Telephone Nr:	021 400 1320
Email:	achmat.ebrahim@capetown.gov.za
WSA Manager	
Designation:	Executive Director
Name:	Gisela Kaiser
Telephone Nr:	021 400 2500
Email:	gisela.kaiser@capetown.gov.za
WSP Manager	
Designation:	Director
Name:	Peter Flower
Telephone Nr:	021 400 4859
Fax Nr:	086 576 1021
Email:	peter.flower@capetown.gov.za
WSDP Manager	
Designation:	Manager
Name:	Zolile Basholo
Telephone Nr:	021 444 3672
Fax Nr:	086 576 1186
Email:	zolile.basholo@capetown.gov.za
IDP Manager	
Designation:	Director
Name:	Lucille Janssens
Telephone Nr:	021 400 9802
Email:	Lucille.Janssens@capetown.gov.za

A3: Water services overview

This section covers population stats, and water services response to this. The population trends in the WSA is informed by the 2011 census. In addition to this information was received from the City's Organisational Policy and Planning Department

The growth rates have been calculated using the population projection figures done in 2014 as per reference below:

Projected Population growth rate: 5 years (2020) = 0.91

Projected Population growth rate: 10 years (2025) = 0.68

**Source: WCG and CCT Population Projections 2011 to 2040*

Estimated Number of households (2017): = 1 147 076

Estimated Population: = 4 014 765

Average number of people per household: = 3.2

**Source: Statistics South Africa 2017 Community Survey*

There seems to be a trend towards smaller households across all population groups: Cape Town's household size is below that of developing countries' average household size of five members, and is moving closer to the average of two to three members noted in many developed countries. Challenges associated with this trend include the increased demand for housing supply to accommodate the trend.

The resulting household and population figures are aligned with the DWS National Geo-Referenced Database which forms the baseline for the WSDP Guide Framework.

The tables below provide an overview of the settlements types within the WSA area of jurisdiction. It includes the population and household numbers as per the water services planning baseline figures.

The water services levels of the respective settlements are illustrated in the context of its adequacy (as per the WSDP Guide Framework definitions) and further summarised in section C2 of this report.

Table A3. 1: Water services overview (water)

Settlement Type	2016/17		2015/16		Water category									
	Households	Population	Households	Population	Adequate: Formal	Adequate: Informal	Adequate: Shared Services	Water resources needs only	O&M needs only	Infrastructure needs only	Infrastructure & O&M needs	Infrastructure, O&M & Resource need	No Services: Informal	No Services: Formal
URBAN														
Formal & Informal households														
<i>Cape town</i>	1 147 076	4 014 765	1 134 925	3 972 237	✓	✓								
Sub-Total	1 147 076	4 014 765	1 134 925	3 972 237	1	1	0	0	0	0	0	0	0	0
Water : Profile of consumers as at June 2017														
None or inadequate(Target)	0	0	0	0										
Communal water supply	158 433	554 515	156 755	548 641		✓								
Controlled volume supply	268 485	939 698	228 393	799 376	✓									
Uncontrolled volume supply	720 158	2 520 552	749 777	2 624 220		✓								
Total	1 147 076	4 014 765	1 134 925	3 972 237										
RURAL														
Rural Small Village														
<i>Example: Rural small village 1</i>														
Dense rural														
Rural Village														
Sub-Total	0	0	0	0										
Rural Scattered														
	0		0	0										
Sub-Total	0		0	0										
Working towns & service centres														
	0	0	0	0										
Sub-Total	0	0	0	0										
Farming														
	0	0	0	0										
Sub-Total	0	0	0	0										
Sub-Total (Rural)	0	0	0	0										
TOTAL	1 147 076	4 014 765	1 134 925	3 972 237	1	1	0	0	0	0	0	0	0	0

Table A3. 2: Water services overview (sanitation)

Settlement Type	2016/17		2015/16		Sanitation category										
	Households	Population	Households	Population	Adequate: Formal	Adequate: Informal	Adequate: Shared Services	Water resources needs only	O&M needs only	Infrastructure needs only	Infrastructure & O&M needs	Infrastructure, O&M & Resource need	No Services: Informal	No Services: Formal	
URBAN					Adequate					Below RDP			None		
Formal & Informal households															
<i>Cape town</i>	1 147 076	4 014 765	1 134 925	3 972 237	1	1	0	0	0	0	0	0	0	0	
Sub-Total	1 147 076	4 014 765	1 134 925	3 972 237	1	1	0	0	0	0	0	0	0	0	
Sanitation: Profile of consumers as at June 2017															
None or inadequate	0														
Communal toilets / Portable flush (excl full flush)	79 903	279 660	74 900	262 150											
Full flush (incl Informal Settlement communal full flush)	1 067 173	3 735 105	1 060 025	3 710 087											
Total	1 147 076	4 014 765	1 134 925	3 972 237	1	1	0	0	0	0	0	0	0	0	
Sub-Total	0	0		0	0	0	0	0	0	0	0	0	0	0	
Sub-Total: (Urban)	1 147 076	4 014 765	1 134 925	3 972 237	1	1	0	0	0	0	0	0	0	0	
RURAL					Adequate					Below RDP			None		
Rural Small Village															
<i>Example: Rural small village 1</i>															
Dense rural															
Rural Village															
Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rural Scattered					Adequate					Below RDP			None		
	0		0	0											
Sub-Total	0		0	0	0	0	0	0	0	0	0	0	0	0	
Working towns & service centres					Adequate					Below RDP			None		
	0	0	0	0											
Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Farming					Adequate					Below RDP			None		
	0	0	0	0											
Sub-Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sub-Total (Rural)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	1 147 076	4 014 765	1 134 925	3 972 237	1	1	0	0	0	0	0	0	0	0	

Section B: WSDP Performance Report

B1: WSDP reference and status

The City of Cape Town Metropolitan Municipality developed its current Water Services Development Plan in February 2012. It was then approved and finally published in October 2012. Its development and approval process is outlined in Table B1.1.

It should be noted that the next Annual report would be in the next five year WSDP.

Table B1.1: WSDP- and reporting reference

Nr	WSDP Title and Reference	Status	Date	WSDP Year	Financial Year	Reporting year
1	Water Services Departmental Sector Plan for City of Cape Town	Drafted:	2/23/2012	Year 1	2012/13	Y-1
		Comment submit:	5/12/2012	Year 2	2013/14	Y-2
		Finalised:	7/13/2012	Year 3	2014/15	Y-3
		Adopted:	10/30/2012	Year 4	2015/16	Y-4
		Published:	10/30/2012	Year 5	2016/17	Y-5

B2: Performance on water services objectives and strategies

The table below presents performance against the water services related objectives and strategies as extracted from the City of Cape Town Integrated Development Plan as well as the strategies compiled as part of the WSDP Guide Framework.

Indicators included in the WSDP and IDP make up the Department SDBIP and it provides a departmental overview of the service delivery by the core branches within the Department. These strategies and objectives mentioned above are categorised into the WSDP topics in Table B2.1

Table B2.1: Performance on water services objectives and strategies per WSDP topic as at June 2017

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Nr	Objective Strategy	Key Performance Indicator	Inclusion (yes/no)	WSDP Year 1		WSDP Year 2		WSDP Year 3		WSDP Year 4		WSDP Year 5	
				FY	2012/13	FY	2013/14	FY	2014/15	FY	2015/16	FY	2016/17
				Target	Actual	Target	Actual	Target	Actual	Target	Actual	Target	Actual
WSDP Topic 1: Administration													
Ensure proactive water services development planning and regulatory compliance *Included in the Branch SDBIP Scorecard													
1.1	Develop and adopt a new WSDP every 5 years	New WSDP every 5 years		none		none		none		none		100%	Completed
1.2	Compile and submit annual WSDP implementation- and water services audit report	Date submitted	*	October every year	Submitted	October every year	Submitted	October every year	January 2015	October every year	April 2016	October every year	Submitted
1.3	Extract and incorporate WSDP objectives and projects into IDP / SDBIP	Date completed	*	September every year	achieved	September every year	achieved	September every year	achieved	September every year	Achieved	September every year	Achieved
1.4	Review and submit the WSDP Guide Framework on annual basis	Date submitted	*	March every year	achieved	March every year	achieved	March every year	achieved	March every year	Achieved	March every year	Achieved
WSDP Topic 2: Demographics													
2.1	Extent of the City of Cape Town urban sprawl is calculated to be.	None established		n/a		n/a		n/a		n/a		n/a	n/a

Table B2.1: Performance on water services objectives and strategies per WSDP topic

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WSDP Topic 3: Service levels														
Service level profile in informal settlement: Improved Basic Services														
3.1	SFA 3 - The Caring City Obj 3.4 IDP 3.4(b) Service Delivery Programme in Informal Settlements	3.E (a) Number of water service points (taps) provided	√	√	1000	Total: 599 IS: 447 BY: 152	1,020	Total: 2 028 IS: 1 438 BY: 590	800	948	600	919	600	678
		3.E (b) Number of sanitation service points (toilets) provided	√	√	3000	Total: 5 043 IS: 4 891 BY: 152	3 100	IS: 5 326 = 2 555 PFT + 1 115 Container + 1 656 Full flush BY: 590	2800	3091	2800	3058	2 800	2 166
		Service rate for informal settlement water complaints	√	√	87%	96.0%	87%	98.22%	88%	98.85%	88%	88.56	88%	97.33%
		Service rate for informal settlement sanitation complaints	√	√	86%	95.48%	87%	97.96%	88%	98.49%	88%	88.64	88%	98.15%

Table B2.1: Performance on water services objectives and strategies per WSDP topic

WSDP Topic 4: Socio economic													
4.1	SFA1 - The Opportunity City Obj 1.2 - IDP 1.2 (d) Expanded Public Works Programme (EPWP)	Number of Expanded Public Works Programme (EPWP) opportunities created	√	Mainstream: 3 500 MSJCP: 675	n/a	4 500	4 934	5 100	5 905	5 100	6 034	5 100	5 971
4.2	FA 1 - The Opportunity City Obj 1.6 IDP 1.6 (a) Seta and EPWP funding used to train apprentices and create other external training opportunities. Training apprentices for vacant posts in the administration and the city.	Number of external trainee and bursary opportunities (excluding apprentices)	√	91	90	92	124	95	164	90	158	95	175
4.3		Number of apprentices	√	94	52	60	71	20	56	20	20	20	37
WSDP Topic 5.1: Water Services Infrastructure management													
Infrastructure of Water and Sanitation Services													
5.1.2		Percentage spend on repairs and maintenance	√	n/a	n/a	100%	109.81%	95%	105.8%	95%	93.2 %	95%	113.6%
5.1.3	Annual Maintenance required *	Metres of water reticulation mains replaced this year	√	56,000	70,279	58 800	55 418	36000	48622	30 000	32814	22000	24433
5.1.4		Metres of sewer reticulation mains replaced this year	√	27,010	32,515	28 360	29 836	23500	25046	12 000	25975	11450	24866

Table B2.1: Performance on water services objectives and strategies per WSDP topic

WSDP Topic 5.2: Water Services Infrastructure management													
Capital expenditure on development and Maintenance of its extensive infrastructure													
5.2.1	1.C Rand value of capital invested in engineering infrastructure (growth, refurbishment and replacement of Water & Sanitation infrastructure)	✓	✓	90% of R617.0M (R555.3M)	89.3% R551.235M	R770 Million Adj. Budget: R750 Million	R 720 171 812 reported as: R720.17 M	R915.94m	R894.93m	R1285.46m	1260.77m	R1261.08m	R1289.03m
5.2.2	SFA1 - The Opportunity City Obj 1.2 IDP 1.2 (c) Investment in Infrastructure	✓	✓	< 1%	0.65%	<1%	1.01%	< 0.9%	0.61%	< 0.8%	0.29%	<0.7%	0.33%
5.2.3	1.F Number of outstanding valid applications for sewerage services expressed as a percentage of total number of billings for the service	✓	✓	< 1%	0.57%	<1%	0.62%	< 0.9%	0.54%	< 0.8%	0.24%	<0.7%	0.37%
WSDP Topic 6: Associated services													
Maintain existing status quo on water and sanitation for associated services													
6.1	To maintain the status quo of on water and sanitation provision for all hospitals and health centres and schools			n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Table B2.1: Performance on water services objectives and strategies per WSDP topic

WSDP Topic 7.1: Conservation and Demand management (Water Resource Management)													
7.1.1	Continued Implementation of the Water Conservation and Demand Management Strategy	Direct indicators not established but are linked to Topic 7.2 Conservation and Demand Management (Water Balance)	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
WSDP Topic 7.2: Conservation and Demand management (Water Balance)													
Water awareness and education													
7.2.1	EPWP employment projects including consumer satisfaction surveys, job seeker registration	Established in Topic 4	✓	n/a	n/a	n/a	500	1280	n/a	n/a	n/a		
Non-Revenue Water													
7.2.2	SFA1 - The Opportunity City Obj 1.3 - IDP 1.3 (b) Water Conservation and Water Demand Management Strategy	1.J Percentage of treated potable water not billed	✓	20.0%	20.0%	20.2%	21.84%	19.70%	22.31%	19.20%	22.20%	18.70%	24.62%
7.2.3		Percentage of potable water reused as treated effluent	✓	-	-	4.50%	4.56%	4.7%	6.49%	4%	6.58%	5%	8.34%
7.2.4		Volume of potable water reused as treated effluent	✓	1 150 Ml/month	1 183 Ml/month	replaced with percentage potable water reused	n/a	n/a	n/a	n/a			

Table B2.1: Performance on water services objectives and strategies per WSDP topic

WSDP Topic 8: Water Resources														
Water use efficiency														
8.1	Volume water treated	Megalitres of water supplied to meet demand management targets	✓	✓	350,381	320,922	337254	314774	330 000	342,696	337 000	329 003.72	367 000	287 030.83
8.2	Volume water supplied	Water supplied to reticulation network	✓	✓	not established	not established	not established	not established	280 000	279,021	288 000	290 668.63	309 000	243 064.88
Water and Wastewater Quality Compliance														
8.3	SFA 3 - The Caring City Obj 3.5 IDP 3.5 (a) Environmental Health Care Programme	Number of WWTWs with >= 90% compliance with DWA water quality requirements	✓	✓	not established	not established	6	7	7	9	n/a	n/a	12	12
		Percentage compliance with 4 critical DWA effluent standards (e-coli count, Ammonia content, Oxygen demanding substances, total suspended solids)	✓	✓	82%	85%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
8.4		3.G Percentage compliance with drinking water quality standards	✓	✓	98%	99.3%	98%	99.83	98%	99.76%	98%	99.67% (May Prelim was 99.68%)	98%	99.65%

Table B2.1: Performance on water services objectives and strategies per WSDP topic

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WSDP Topic 9: Financial profile													
Capital and Operating Expenditure													
9.1	Percentage spend of capital budget	✓	✓	90% of Planned YTD	86.6% R596.642M	91%	88.3%	92%	94.0%	90%	90.60%	90%	95.4%
	SFA 5 - The Well Run City IDP 5.3 (a) Financial management programme	✓	✓	90% of R617.0M (R555.3M)	89.3% R551.235M	R770 Million Adj. Budget: R750 Million	R 720 171 812 reported as: R720.17 M	R915.94m	R894.93m	R1 285.46m New after Bud Adj	R1 260.77m	R1 261.08m	R1 289.03m
9.2	1.C Rand value of capital invested in engineering infrastructure (growth, refurbishment and replacement of Water & Sanitation infrastructure)	✓	✓										
Operating Expenditure													
9.3	Percentage of Operating Budget spent	✓	✓	95% of YTD	99.6%	95.0%	93.3%	95%	99.6%	95%	104.80%	95%	104.3%
	SFA 5 - The Well Run City IDP 5.3 (a) Financial management programme	✓	✓										
Revenue													
9.4	Revenue collected as a percentage of billed amount (Water)	✓	✓	91.50%	90.56%	92.5%	90.8%	86%	87.89%	86%	78.52%	83%	80.00%
9.5	Revenue collected as a percentage of billed amount (Sewerage)	✓	✓	91.5%	89.85%	92.5%	90.7%	89%	91.06%	89%	86.35%	87%	92.43%
9.6	Percentage of water meters read on a monthly basis	✓	✓	88%	83.6%	88%	82.52%	88%	81.89%	83%	87.91%	84%	89%
General													
9.7	Percentage of assets verified	✓	✓	100% completed by 30 June	92.46%	100% asset register verified by directorate/ department	82.17%	100% asset register verified	97.77%	100% asset register verified	100%	100%	98.91%
9.8	Percentage Internal Audit findings resolved	✓	✓	70%	43%	70%	No follow-up audits	70%	54%	70%	43%	70%	60%

Table B2.1: Performance on water services objectives and strategies per WSDP topic

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WSDP Topic 10: Institutional Arrangements profile													
10.1	Percentage incidence of overtime hours in excess of 43hrs	✓	✓	100%	not established	≤9%	3.51%	≤ 21%	0.075	≤ 9%	7.64%	≤ 9%	7.00%
10.2	Percentage adherence to EE target in all appointments (internal & external)	✓	✓	100%	112.96%	100%	113.85%	80%	97.82%	80%	98.06%	85%	98.48%
10.3	Percentage adherence to 2% of people with disabilities (PWD)	✓	✓	not established	not established	not established	not established	2%	1.37%	2%	2.5%	2%	2.80%
10.4	Percentage of absenteeism	✓	✓	not established	not established	not established	not established	≤ 5%	5.80%	≤ 5%	6.04%	≤ 5%	6.00%
10.5	Percentage vacancy rate	✓	✓	not established	not established	not established	not established	≤ 7%	11.90%	≤ 7%	11.50%	≤ 7%	11.60%
10.6	SFA 5 - The Well Run City Obj 5.2 IDP 5.2 (a) HR, Talent Management, Skills Development programme (Integrated Talent management Approach)	✓	✓	100%	99.11%	99.1%	100.0%	Replaced with Percentage vacancy rate and Percentage of absenteeism	Replaced with Percentage vacancy rate and Percentage of absenteeism	n/a	n/a	n/a	n/a
10.7	Percentage budget spent on implementation of WSP	✓	✓	not established	not established	not established	not established	95%	68.72%	95%	103.60%	95%	98.48%
10.8	Percentage adherence to employee talent target (composite indicator)	✓	✓	100%	84.59%	84.59%	100%	Replaced with Percentage budget spent on implementation of WSP	Replaced with Percentage budget spent on implementation of WSP	n/a	n/a	n/a	n/a
10.9	Percentage adherence to OHS target (composite Indicator)	✓	✓	New	New	New	New	95%	tbc	n/a	n/a	n/a	n/a
10.10	Percentage OHS incidents reported	✓	✓	New	New	New	New	New	New	≤ 5%	1.80%	≤ 5%	3.42%
10.11	Percentage OHS investigations completed	✓	✓	New	New	New	New	New	New	100%	Not reported on due to SAP evidence	100%	100%

The following performance highlights indicated in Table B2.1 above from the SDBIP are further highlighted below for the previous financial year:

Service levels

- The number of water service points (taps) for 2016/17 past financial year targeted was 600 and the actual taps provided were 678.
- There were 2800 targeted number of Sanitation service points (toilets) and 2166 were actually provided in 2016/17 past financial year.

Socio economic:

- The Department has created 5 971 job opportunities against the target of 5 100 EPWP opportunities.
- Number of external trainee and bursary opportunities (excluding apprentices) created were 175 against the target of 95.

Water services infrastructure management:

- A total of 24 433 meters of water reticulation mains have been replaced against the target of 22 000 meters.
- A total of 24 866 meters of sewerage reticulation mains have been replaced against the target of 11 450 meters.
- Northern area sewer line to increase capacity is completed as part of a multi-year project from Thornton to Langa pump station via Epping Industrial, at a total cost of R150 million. At the 2016 IMESA Awards, phase 2 of the construction of the northern areas sewer, CCT received 2nd place award.
- An updated integrated master plan for the water and sanitation infrastructure was last produced in 2014/15 financial year as a planning tool and it is still relevant currently. This included all planned future infrastructure investments.
- The Department received the Award of Excellence by the Southern African Society of Trenchless Technology for using a micro-tunnelling method as part of Cape Flats 3 Bulk Sewer project.
- Cape flats 3 sewer project which includes 5.0km of rising main and gravity sewer and the longest tunnelling service for any Utility in Africa.
- The Cape Flats 3 Bulk Sewer – Phase 2 is a critical component of the City's sewer network and serves a population of approximately 350 000 residents in the Bonteheuwel, Heideveld, Manenberg, Gugulethu and Nyanga areas. It consists of the Design and construction of a new 1000mm diameter sewer rising main (4800m long) and 1200mm diameter gravity sewer (510m long) to complete existing Cape Flats sewer from Lansdowne Road to Bridgetown pump station. The additional duty pump planned in the Mechanical and Electrical upgrades in the Bridgetown Pump Station is 1300 l/s with the complete systems' design life to the year 2062.
- Construction has started on the following bulk sewer projects:
 - Sandrift Montague Gardens project which include 1.0km of CIPP and 1.0km of gravity sewer
 - Somerset West Business Park area which includes the construction of 3km of gravity sewer line

Engineering and Asset Management:

- The Engineering and Asset Management branch made history by becoming the first municipal branch within the City of Cape Town to receive three internationally recognised certificates for its integrated management systems. These include: International Organisation for Standardisation (ISO) certificates for ISO 9001, ISO 4001 as well as the Occupational Health and Safety Standard (OHSAS) 18001. The successful certification would not have been possible without the support and commitment of all the Engineering and Asset Management (EAM) staff. The EAM branch was also awarded the runner-up for productivity, SA National Award, in the Public Sector category, after winning the Provincial Gold Award in the same category

Conservation and demand management:

- A significant increase has been identified in the number of water management devices installed from 24 997 - 26 683 during 2015/16 and 2016/17 financial year respectively.
- The percentage of treated effluent the Department has been able to recycle for reuse (for irrigation and industrial purposes) has outperformed the targeted 5% by reaching 8.34% by June 2017. During summer months close to 60 ML of treated effluent was used per day contributing to saving valuable drinking water.
- The City of Cape Town and the international conservation organisation The Nature Conservancy (TNC) have formally agreed to a water fund for Cape Town, which aims to safeguard water supplies and biodiversity while supporting local livelihoods. It will be a first for South Africa.
- The tender should be in place by Mid November this year to retrofit all municipal building and facilities to replace all automatic urinals with water efficiency asset in ablution facilities such as water less urinals, demand taps and flushing units and metered flushing units to minimise water wastage in all council toilets or ablution facilities.

Water resources:

- Driving sustainable water security

A tender is in place for the professional services of the Brakkloof Reservoir roof repair and term tenders are used for fencing, concrete rehabilitation and joint sealing of reservoirs. This is to ensure integrity of the City's water supply, securing clean drinking water to provide W&S improved drinking water system with resilience to vandalism, water losses, natural disasters and prevent contamination. The reservoir rehabilitation also helps water utilities to enhance the security measures of their water infrastructure systems and improved service life.

Financial profile:

- Percentage of assets verified were achieved by 98.91%, against a target of 100%.

Social and customer service requirements:

- A new and improved website was created and populated with useful information to assist residents, learners, students, educators and visitors.
- ISO 9001:2015 certification was awarded to the Department's Reticulation Branch, the Water Demand Management and Strategy Branch, as well as the Finance and Commercial Branch (Administration) and Support services branch. EAM went through an ISO 9001, ISO 14001 and OSHAS 18001 audit and were approved for all three certificates.
- The Department developed and implemented an e-portal application enabling customers to capture their own meter readings. This forms part of a meter-reading campaign initiated to request customers to SMS their reading or provide it via the e-portal.

B3: Status of water services projects

The table below presents the projects status or records related to Water Service Authority (City of Cape Town) with allocated budget and specifically focussing on Water and Sanitation Department.

These projects were implemented in 2016/17 financial year and are categorised according to departmental Branches in table B3.1 below:

Table B3.1: Water Services projects status and performance

Sheet 1 of 4

Nr	Project Title and Description	Inclusion		Total Project Cost (R'000)	Year 2017 Performance - FY2016/17			Funding Source(s)	Project Category / Type	Planned Period		Project Status
		WSDP	IDP		FY Budget (R)	Spent (R)	%			From FY	To FY	
C11.86077-F2	Bulk Water Augmentation Scheme	Yes	Yes	229 762 496	20 069 000	17 597 848	88%	3 CRR: Water	Bulk Water	Jul-10	Jun-23	In progress
C11.86077-F4	Bulk Water Augmentation Scheme	Yes	Yes	229 762 496	1 000 000	1 000 000	100%	4 NT USDG	Bulk Water	Jul-10	Jun-23	In progress
C12.86019-F2	TMS Aquifer Deep Borehole	Yes	Yes	38 497 860	5 000 000	3 640 499	73%	1 EFF	Bulk Water	Jul-11	Jun-21	In progress
C15.86043-F1	Additional Resources Desalination Reclai	Yes	Yes	3 520 000 000	9 000 000	3 321 524	37%	1 EFF	Bulk Water	Jul-16	Jun-23	In progress
C16.86010-F1	BW Infrastructure Replace/Refurb 15/16	Yes	Yes	58 024 465	-	46 112	-	1 EFF	Bulk Water	Jul-15	Jun-16	Annual Bulk provision
CPX.0001787-F1	Development of Add Infrastructure 16/17	Yes	Yes	30 000 000	19 953 003	19 625 242	98%	1 EFF	Bulk Water	Jul-16	Jul-17	Annual Bulk provision
CPX.0001867-F1	BW Infrastructure Replace/Refurb 16/17	Yes	Yes	4 900 000	46 700 000	46 539 594	100%	1 EFF	Bulk Water	Jul-16	Jun-17	Annual Bulk provision
CPX.0003851-F2	Contermanskloof Reservoir	Yes	Yes	219 635 564	27 700 000	26 743 830	97%	4 NT USDG	Bulk Water	Jul-14	Jun-20	In progress
CPX.0003893-F2	OSEC (Electrolytic Chlorination Infr)	Yes	Yes	91 129 323	500 000	317 872	64%	CGD4 NT USDG	Bulk Water	Jul-14	Jun-20	In progress
CPX.0003895-F1	Steenbras Reservoir	Yes	Yes	465 127 840	110 000	109 115	99%	1 EFF	Bulk Water	Jul-16	Jun-21	In planning
C11.86077-F1	Bulk Water Augmentation Scheme	Yes	Yes	229 762 496	-	-	-	1EFF	Bulk Water	Jul-10	Jun-23	In progress
CPX.0005992-F1	Acquisition & Commissioning of large Gen	Yes	Yes	325 136 131	100 000 000	99 999 252	100%	3 CRR: EmergencyPr ep	Engineering & Asset Man	Jul-16	Jun-18	In progress
C08.86027-F1	Somerset West Bus. Park Main sewer	Yes	Yes	66 205 226	14 123 799	13 386 622	95%	1 EFF	Reticulation - Sewer	Jul-07	Jun-17	Completed
C08.86027-F2	Somerset West Bus. Park Main sewer	Yes	Yes	66 205 226	9 000 000	8 897 507	99%	3 BICL Sewer:Hel	Reticulation - Sewer	Jul-07	Jun-17	Completed
C09.86015-F1	Rehab Outfall Sewers Pentz Sandrift m/qu	Yes	Yes	77 657 420	25 350 000	25 343 432	100%	1 EFF	Reticulation - Sewer	Jul-11	Jun-17	completed
C13.86053-F1	Completion of Cape Flats III Bulk Sewer	Yes	Yes	249 208 484	70 000 000	70 000 000	100%	4 NT USDG	Reticulation - Sewer	Jul-12	Jun-18	Close to completion
C13.86053-F2	Completion of Cape Flats III Bulk Sewer	Yes	Yes	249 208 484	13 802 102	13 800 169	100%	1 EFF	Reticulation - Sewer	Jul-12	Jun-18	Close to completion
C15.86046-F1	West Beach S/Pumpstation and rising Main	Yes	Yes	21 000 000	21 000 000	19 595 030	93%	3 BICL Sewer:Tyg N	Reticulation - Sewer	Jul-14	Jun-18	In progress
CPX.0002123-F1	Telemetry Automation (Retic)	Yes	Yes	3 000 000	2 200 000	2 199 975	100%	1 EFF	Reticulation - Sewer	Jul-16	Jun-17	Annual Bulk provision
CPX.0002892-	Repl & Upgr Sew Pump Station	Yes	Yes	28 517 793		4 816 251	86%	1 EFF	Reticulation -	Jul-16	Jun-17	Annual Bulk

	Acquisition & Registration & servitude	Yes	Yes	64 364 205	64 364 205	64 225 506	100%	1 EFF	Reticulation - Water	Jul-16	Jun-17	Annual Bulk provision
CPX.0007783-F1	Acquisition & Registration & servitude	Yes	Yes	64 364 205	64 364 205	64 225 506	100%	1 EFF	Reticulation - Water	Jul-16	Jun-17	Annual Bulk provision
CPX.0008000-F1	Network Upgr: Andrews & Darling St Houtb	Yes	Yes	1 053 701	1 053 701	1 053 701	100%	1 EFF	Reticulation - Water	Jul-16	Jun-17	Annual Bulk provision
CPX.0008001-F1	Network Repl: Imizamu Yethu	Yes	Yes	2 000 000	2 000 000	2 000 000	100%	1 EFF	Reticulation - Water	Jul-16	Jun-17	Annual Bulk provision
CPX.0008002-F1	Network Repl: King & Union St Houtbaai	Yes	Yes	1 245 098	1 245 098	1 245 097	100%	1 EFF	Reticulation - Water	Jul-16	Jun-17	Annual Bulk provision
CPX.0008005-F1	Network Repl: Oakdale Various streets	Yes	Yes	341 250	341 250	341 250	100%	1 EFF	Reticulation - Water	Jul-16	Jun-17	Annual Bulk provision
CPX.0008006-F1	Network Repl: Loevenstein Various	Yes	Yes	8 103 812	8 103 812	8 103 811	100%	1 EFF	Reticulation - Water	Jul-16	Jun-17	Annual Bulk provision
CPX.0008012-F1	Network Repl: Khayelitsha Various	Yes	Yes	2 050 000	2 050 000	2 049 987	100%	4 NT USDG	Reticulation - Water	Jul-16	Jun-17	Annual Bulk provision
CPX.0008720-F1	Network Repl:Kommetjie Rd Ou Kaapseweg	Yes	Yes	125 873 500	8 500 000	8 500 000	100%	1 EFF	Reticulation - Water	Jul-16	Jul-18	In progress
C14.86056-F2	Spes Bona Reservoir 35 MI	Yes	Yes	48 145 195	24 500 000	23 833 564	97%	1 EFF	Reticulation - Water	Jul-13	Jun-18	Close to completion
C06.30148-F1	Mitchells Plain WasteWater Treatment Works	Yes	Yes	264 262 929	11 500 000	11 490 898	100%	1 EFF	WWTW	Jul-15	Jun-17	Completed
C10.86018-F1	Gordons Bay WWTW-Improvements	Yes	Yes	18 950 000	500 000	464 816	93%	1 EFF	WWTW	Jul-16	Jul-17	Completed
C10.86033-F3	Zandvliet WWTW-Extension	Yes	Yes	894 247 622	-	-	-	4 NT USDG	WWTW	Jul-11	Jun-20	In progress
C11.86063-F1	Potsdam WWTW – Extension	Yes	Yes	800 000 000	2 430 000	2 210 725	91%	1 EFF	WWTW	Jul-10	Jun-20	In progress
C12.86059-F1	Macassar WWTW Extension	Yes	Yes	400 000 000	290 000	161 893	56%	1 EFF	WWTW	Jul-12	Jul-20	In progress
C12.86090-F1	BlacMac Sewer: Upgrade sewer diversion	Yes	Yes	100 000 000	5 500 000	5 500 000	100%	4 Prov House Dev Brd	WWTW	Jul-16	Jul-17	Completed
C12.86091-F1	Borchards Quarry WWTW	Yes	Yes	402 744 318	97 889 000	88 803 441	91%	4 NT USDG	WWTW	Jul-11	Jun-19	In progress
C12.86094-F2	Scottsdene WWTW	Yes	Yes	44 284 487	300 000	299 720	100%	4 NT USDG	WWTW	Jul-14	Jun-20	In progress
C13.86005-F1	Cape Flats WWTW-Refurbish various structures	Yes	Yes	252 290 872	28 000 000	27 739 988	99%	1 EFF	WWTW	Jul-13	Jun-20	In progress
C13.86010-F1	Mitchells Plain WWTW-Improvements Phase2	Yes	Yes	264 262 929	12 000 000	11 901 917	99%	1 EFF	WWTW	Jul-13	Jun-20	In progress
C13.86010-F2	Mitchells Plain WWTW-Improvements Phase2	Yes	Yes	264 262 929	27 665 000	27 410 853	99%	4 NT USDG	WWTW	Jul-13	Jun-20	In progress
C13.86081-F2	Athlone WWTW-Capacity Extension-phase 1	Yes	Yes	771 500 000	6 000 000	5 999 408	100%	4 NT USDG	WWTW	Jul-15	Jun-20	In progress
C14.86043-F1	Melkbos WWTW-Effluent Disinfection	Yes	Yes	59 700 314	3 000 000	3 000 000	100%	1 EFF	WWTW	Jul-14	Jun-20	In progress
C14.86044-F2	Wesfleur WWTW-Capacity Extension USDG	Yes	Yes	100 000 000	1 000 000	999 997	100%	4 NT USDG	WWTW	Jul-15	Jun-19	In progress
CPX.0002289-F1	Infrastructure Replace/Refurbish - WWTW	Yes	Yes	28 605 000	28 605 000	27 429 783	96%	1 EFF	WWTW	Jul-16	Jun-17	Annual Bulk provision

	Infrastructure Replace/Refurbish - WWTW	Yes	Yes	1 000 000	1 000 000	1 000 000	100%	4 NT USDG	WWTW	Jul-16	Jun-17	Annual Bulk provision
CPX.0002289-F2	Infrastructure Replace/Refurbish - WWTW	Yes	Yes	1 000 000	1 000 000	1 000 000	100%	4 NT USDG	WWTW	Jul-16	Jun-17	Annual Bulk provision
CPX.0004870-F1	Hout Bay Refurbishment	Yes	Yes	25 000 000	14 500 000	5 212 661	36%	1 EFF	WWTW	Jul-15	Jul-18	Close to completion
CPX.0007929-F2	Zandvliet WWTW: Prim Treatment & Sludge	Yes	Yes	1 742 030 619	2 000 000	2 000 000	100%	4 NT USDG	WWTW	Jul-16	Jun-20	In progress
CPX.0007930-F1	Zandvliet WWTW: Membrane Bio Reactor	Yes	Yes	894 247 622	5 000 000	5 000 000	100%	4 NT USDG	WWTW	Jul-16	Jun-20	In progress
CPX.0007931-F1	Black-Mac Screening & Macassar P/St	Yes	Yes	53 117 520	34 862 207	34 487 310	99%	4 NT USDG	WWTW	Jul-16	Jul-17	completed
CPX.0007932-F1	Threchless Rehab: Black-Mac network	Yes	Yes	894 247 622	67 846 000	64 660 701	95%	4 NT USDG	WWTW	Jul-16	Jun-19	In progress
CPX.0008041-F1	Bellville WWTW Extension	Yes	Yes	195 849 995	18 940 000	18 263 980	96%	1 EFF	WWTW	Jul-16	Jun-20	In progress
C15.86031-F1	Water Meters New Connections	Yes	Yes	20 865 268	-	70 294	-	4 Private Sector Fin	Fin & Commercial	Jul-16	Jun-17	Annual Bulk provision
C15.86031-F4	Water Meters New Connections	Yes	Yes	20 865 268	-	261 639	-	1 EFF	Fin & Commercial	Jul-16	Jun-17	Annual Bulk provision
C16.86030-F2	Meter Replacement Programme	Yes	Yes	70 000 000	-	1 550	-	3 CRR: General	Fin & Commercial	Jul-16	Jun-17	Annual Bulk provision
CPX.0001935-F1	Meter Replacement Programme	Yes	Yes	242 300 000	162 300 000	145 877 695	90%	1 EFF	Fin & Commercial	Jul-16	Jun-17	Annual Bulk provision
CPX.0001935-F2	Meter Replacement Programme	Yes	Yes	242 300 000	80 000 000	79 759 871	100%	2 Revenue	Fin & Commercial	Jul-16	Jun-17	Annual Bulk provision
CPX.0001955-F2	Water Meters New Connections	Yes	Yes	24 434 235	12 434 235	12 284 974	99%	4 NT USDG	Fin & Commercial	Jul-16	Jun-17	Annual Bulk provision
CPX.0001955-F3	Water Meters New Connections	Yes	Yes	24 434 235	12 000 000	8 820 336	74%	4 Private Sector Fin	Fin & Commercial	Jul-16	Jun-17	Annual Bulk provision
CPX.0001965-F1	WS contingency provision - Insurance	Yes	Yes	500 000	227 903	-	0%	2 Revenue: Insurance	Fin & Commercial	Jul-16	Jun-17	Annual Bulk provision
CPX.0003988-F1	Informal Settlements Sanitation Installa	Yes	Yes	20 000 000	19 831 696	12 783 568	64%	1 EFF	Informal Settlements	Jul-16	Jun-17	Annual Bulk provision
CPX.0003991-F1	Informal settlements water installations	Yes	Yes	5 000 000	1 000 000	271 935	27%	1 EFF	Informal Settlements	Jul-16	Jun-17	Annual Bulk provision
CPX.0003991-F2	Informal settlements water installations	Yes	Yes	5 000 000	868 586	867 176	100%	4 NT USDG	Informal Settlements	Jul-16	Jun-17	Annual Bulk provision
C10.86130-F1	Regional resources development	Yes	Yes	46 151 123	8 550 664	8 237 993	96%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
C12.86074-F1	Construction of new Head Office	Yes	Yes	295 031 392	142 109 000	142 109 000	100%	1 EFF	Institutional	Jul-14	Jun-18	In progress
C12.86079-F1	EAM Depot Realignment - 5 Nodal System	Yes	Yes	137 409 676	44 223 322	44 223 101	100%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0001784-F1	Replacement of Plant & Equipment 16/17	Yes	Yes	500 000	500 000	495 335	99%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0001894-F1	Plant & Equipment Additional 16/17	Yes	Yes	500 000	500 000	468 105	94%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision

CPX.0001894-F2	Plant & Equipment Additional 16/17	Yes	Yes	60 097	60 097	41 525	69%	2 Revenue: Insurance	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0001992-F1	Furniture & Equipment: Additional	Yes	Yes	2 738 934	2 738 934	2 649 355	97%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0002105-F1	IT: System, Infra. Equipment: Additional	Yes	Yes	38 381 907	38 381 907	38 197 158	100%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0002108-F1	Specialised Equipment: Additional	Yes	Yes	4 000 000	4 000 000	3 977 362	99%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0002125-F1	Vehicles, Plant Equip: Additional	Yes	Yes	21 780 965	21 780 965	21 776 094	100%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0002285-F1	Furniture, Tools & Equip: Additional WWTW	Yes	Yes	258 308	258 308	185 857	72%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0002354-F1	Sundry Equip: Additional various WWTW	Yes	Yes	341 692	341 692	242 695	71%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0004962-F1	Admin, storage and mess upgrading	Yes	Yes	22 600 000	1 000 000	1 000 000	100%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0005531-F1	Small Plant & Equip: Additional (Retic)	Yes	Yes	5 105 328	5 105 328	5 006 709	98%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0007467-F1	Replacement Vehicles - FY 16/17	Yes	Yes	5 000 000	5 000 000	4 995 221	100%	1 EFF	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0009482-F1	Replacement Vehicles - Sale of assets	Yes	Yes	2 083 844	2 083 844	2 082 478	100%	3 Assets Sale	Institutional	Jul-16	Jun-17	Annual Bulk provision
CPX.0001852-F1	Refurbishment of Labs	Yes	Yes	400 000	400 000	396 252	99%	1 EFF	Scientific Services	Jul-16	Jun-17	Annual Bulk provision
CPX.0001865-F1	Laboratory Equipment: Additional	Yes	Yes	3 500 000	3 500 000	3 499 153	100%	1 EFF	Scientific Services	Jul-16	Jun-17	Annual Bulk provision
CPX.0001905-F1	Pressure Management: 16/17	Yes	Yes	20 000 000	17 004 851	15 449 405	91%	1 EFF	Water Demand Man	Jul-16	Jun-17	Annual Bulk provision
CPX.0001908-F1	Treated Effluent: Reuse & Inf Upgrades	Yes	Yes	25 200 000	25 200 000	24 395 654	97%	1 EFF	Water Demand Man	Jul-16	Jun-17	Annual Bulk provision
CPX.0004869-F1	Zone Metering & Valves	Yes	Yes	5 000 000	1 695 150	1 673 047	99%	1 EFF	Water Demand Man	Jul-16	Jun-17	Annual Bulk provision
CPX.0009418-F1	CCTV & Specialised Equipment	Yes	Yes	100 000	100 000	27 405	27%	1 EFF	Water Demand Man	Jul-16	Jun-17	Annual Bulk provision

B4: Past financial year water services project impact declaration

The table below presents the projects completed within the departmental Branches with settlement together with number of households and population benefitted. These projects mentioned above are highlighted in table B4.1 below:

Table B4.1: Past financial year project impact declaration

Nr	Project Title and Description	Project Category	Settlements which benefitted	Nr Beneficiaries		Impact Declaration
				HH's	Pop	
CPX.0008875-F1	Lourens River Pump Station Upgrade	Reticulation	Lourens river pump station upgrade - The whole of the Somerset West, Strand and Lwandle catchments will benefit from the upgrade of this pump station.	39,304	125 773	This refurbishment project will also accommodate all the future development areas; upgrade of the existing network within the surroundings
C08.86027-F2	Somerset West Bus. Park Main sewer	Reticulation	Somerset West business park sewer main affects the catchment of Lourens river pump station as well as Dennehof pump station catchment.	50 389	161 245	Somerset West business park sewer main is completed and will divert flow to Sir Lowry's pass outfall to create relief on the Trappies outfall and Lourens River PS.
C16.86038-F2	Replace & Upgr Sewer Network (Citywide)	Reticulation	City wide impact	-	-	Constantly rehabilitating or replacing the aging Sanitation network infrastructure
C16.86039-F2	Replace & Upgr Water Network (City Wide)	Reticulation	City wide impact	-	-	Constantly rehabilitating or replacing the aging Water network infrastructure
CPX.0002760-F1	Repl & Upgr Sew Pump Station	Reticulation	City wide impact	-	-	Constantly rehabilitating or replacing the aging Water and Sanitation pump station infrastructure
CPX.0002760-F2	Repl & Upgr Sew Pump Station	Reticulation	City wide impact	-	-	Constantly rehabilitating or replacing the aging Water and Sanitation pump station infrastructure
CPX.0005791-F1	Upgrade Reservoirs City Wide	Reticulation	City wide impact	-	-	Constantly rehabilitating or replacing the aging Water reservoirs infrastructure
C09.86015-F1	Rehab Outfall Sewers Pentz Sandrift m/qu	Reticulation	The rehabilitation of Sandrift outfall sewer will affect the Sanddrift, Koeberg, Ysterplaat, Brooklyn and Century City areas.	200 000	640 000	The sewer serves about 200 000 residents within the Catchment of Potsdam WWTW.

C13.86053-F1	Completion of Cape Flats III Bulk Sewer	Reticulation	The CF3 is a critical component of the City's sewer network and serves a population of approximately 350 000 residents in the Bonteheuvel, Heideveld, Mannenberg, Gugulethu and Nyanga areas. The upgrading of the Bridgetown Pump station forms part of the bigger project and is ongoing.	350 000	1,120,000	Department has completed 5.2 km of pipeline of the second phase of its Cape Flats 3 Bulk Sewer (CF3) project. The Cape Flats 3 enables transfer of sewer from Athlone WWTW to Cape Flats WWTW. This will increase the capacity of the network to transfer sewer and sludge.
C15.86046-F1	West Beach S/Pumpstation and rising Main	Reticulation	The first phase of the West Beach pump station and rising main, to a value of R21 million, have been successfully upgraded to ensure that the growth in the Sunningdale area is not hampered by available sewer conveyance capacity.			The second phase including the upgrading of the Railway pump station is already underway. The project will accommodate future areas in Sunningdale area.
C14.86056-F1	Spes Bona Reservoir 35 MI	Reticulation	It serves the northern area's including Garden City, Greenville housing development in Fisantekraal	18 000	57,600	The 35 MI Spes Bona reservoir has been successfully completed at a capital cost of R54.5million. It will provide water to an estimated 18 000 subsidised housing units and is a requirement for the Garden Cities; Greenville development at Fisantekraal, the future Bella Riva development and other, future housing projects along the Darwin development corridor.
Nr	Project Title and Description	Project Category	Settlements which benefitted	Nr Beneficiaries		Impact Declaration
C16.86016-F1	Treated Effluent: Reuse & Infrastructure Upgrades	WDM &S	Citywide impact in terms of a reduction in demand for potable water	-	-	-
C16.86017-F1	Zone Metering & Valves	WDM &S	-	-	-	More accurately measuring water losses throughout the City by reconfiguring the existing zones and to create new zones.
Nr	Project Title and Description	Project Category	Settlements which benefitted	Nr Beneficiaries		Impact Declaration
C06.30148-F1	Mitchells Plain Waste/Water Treatment Works	WWTW	This upgrade will affect the catchment of the treatment works which includes the areas of Mitchells Plain, Pelican Heights, Strandfontein, Ikwezi Park and Southern part of Philippi.	77 454	247 853	This upgrade will allow the city to maintain the level of service for the catchment for the treatment of wastewater.
		WWTW	Catchment described as above	77 454	247 853	Improve effectiveness of the works and rehabilitation of the plant
CPX.000804-I-F1	Bellville WWTW Extension	WWTW	Bellville WWTW was just recently expanded with an additional 20 ML with the development of a membrane technology treatment	136 000	435 200	The membrane technology installation and planned rehabilitation is likely to enable an additional 40 ML at the Bellville treatment works.

Nr	Project Title and Description	Project Category	Settlements which benefitted	Nr Beneficiaries		Impact Declaration
				HH	Population	
CPX.0007929-F2	Zandvliet WWTW: Prim Treatment & Sludge	WWTW	component. There is intention to rehabilitate older sections of the plant. Areas that will benefit are Kenridge, Eversdal, Brakenfell, Bellville and parts of Vredekleef.	171 801	549 763	Increase the capacity by approximately 40 ML but would alternately have to increase capacity by 70 ML. These phased upgrades will result in having improved treatment of effluent and eventually compliant treatment quality.
C12.86091-F1	Borchards Quarry WWTW	WWTW	Currently this WWTW is running over capacity by approximately 16 ML. This catchment is large and includes the areas of Delft, Blue Downs, Khayelitsha, Kulis River, Eersteriver, Blackheath and the Eastern side of CPT International Airport.	33 431	106 979	Improve capacity of the WWTW to accommodate the future developments.
C14.86044-F2	Wesfleur Capacity Extension USDG	WWTW	This catchment is large and includes the areas of Belhar, Bishop Levis, Valhalha park and western side of CPT International Airport.	16 367	52 374	This will improve the Treatment capacity and be able to accommodate future development areas.
C16.86040-F2	Infrastructure Replace/Refurbish WWTW	WWTW	This catchment includes the areas of Atlantis, West Coast farms and Mamre.	-	-	To keep the equipment and plant of all WWTW operating optimally
C12.86094-F2	Scottsdene WWTW	WWTW	There are a couple of large developments that will be able to drain to this WWTW and take additional pressure off Bellville	19 537	62 518	Improving efficiency of existing WWTW and transfer loads in the most effective and economic way possible
CPX.0004870-F1	Hout Refurbishment Bay	WWTW	The refurbishment will affect all the suburb areas within the catchment.	5722	18,310	This will improve the treatment performance
C13.86081-F2	Athlone Capacity Extension-phase 1	WWTW	The extension will affect the catchment of the treatment works which includes the areas of Athlone, Lansdowne, Maitland, Claremont Observatory, Newlands, Rondebosch, Salt river etc	91624	293 197	This will improve the treatment performance and increase the load taking into account the existing and future development areas.
C14.86055-F2	Development of Additional Infrastructure	BW	City wide impact	-	-	-
C16.86004-F1	Replacement of Plant & Equipment 15/16	BW	City wide impact	-	-	-
CPX.0003893-F1	OSEC (Electrolytic Chlorination Infr)	BW	City wide impact	-	-	-
CPX.0003893-F2	OSEC (Electrolytic Chlorination Infr)	BW	City wide impact	-	-	-

Population is derived from the average persons per house of 3.2

Further Key projects in 2016/17

- More than R340m has been spent during 2016/17 on various wastewater treatment works (WWTWs), and included various improvements, capacity extensions and refurbishments. Biggest part of expenditure was for Mitchells Plain and Borcharde's Quarry WWTWs.
- The Neptune reservoir, Simonstown, has been provided with a new floating roof ensuring that water quality is not compromised.

Section C: Water Services Audit Report

This Section C: Water Services Audit Report represents the requirements as established in the 'Regulations relating to compulsory national standards and measures to conserve water', as issued in terms of sections 9 (1) and 73 (1) (j) of the Water Services Act, 1997.

C1. Quantity of water services provided (Water Balance)

The 'Regulations relating to compulsory national standards and measures to conserve water', requires in section 10 (2) (a), that the water services authority should report on the quantity of water services provided, including at least:

- (i) The quantity of raw water abstracted
- (ii) the quantity of water used by each user sector
- (iii) the quantity of water provided to the water services institution by another water services institution
- (iv) the quantity of waste received at WWTP; and
- (v) the quantity of effluent discharged from WWTP and approved for use by the water services institution.

In addition, the regulations require in section 10 (2) (g), the WSA to report:

- (i) the results of the water balance as set out in regulation 11;
- (ii) the total quantity of water unaccounted for

Table C1.1a: Quantity of water services provided / water balance (m³ per annum) as at June 2017

WSDP Ref. #	Regulations Ref. #	Description	m ³ per annum			Ml/d		
			Year 2017	Year 2016	Year - 2015	Year 2017	Year 2016	Year - 2015
			FY2016/17	FY2015/16	FY2014/15	FY2016/17	FY2015/16	FY2014/15
		RAW WATER						
7.2.1		Surface water purchased	208 481 967	228 472 634	250,273,421	571	626	686
7.1 / 7.2.2		Surface water abstracted	79 386 420	93 518 803	93,198,389	217	256	255
7.1 / 7.2.3		Ground water abstracted	2 144 854	1 606 064	1,006,715	6	4	3
7.2.14		Effluent recycled	0		0	0	52	0
7.2.4		less Raw water supplied to others	0	0	0	0	0	0
7.2.5		Sub-Total: Raw Water supplied	290 013 242	342 716 999	344,478,525	795	939	944
	10.2 (g) (i)	BULK WATER SUPPLY						
7.2.6		Volume of water treated	287 030 829	329 003 715	342,696,439	786	901	939
7.2.7	10.2 (a) (ii)	Purchased treated water	0	0	-	0	-	0
7.2.7A		Ground water not treated	0	0	-	0	-	0
7.2.6A		<i>of which</i> Treated water supplied to others	26 478 719	33 556 585	37,764,262	73	92	103
		Sub-Total: System Input Volume	313 509 548	362 560 300	380 460 701	859	993	1042
		WATER CONSUMPTION						
7.2.8.1		Billed Metered:	216 358 789	255 971 841	266,229,322	593	701	729
	10.2 (a) (i)	External Customers	26 478 719	33 556 585	37,764,262	73	92	103
	10.2 (a) (i)	Internal customers	189 880 070	222 415 256	228,465,060	520	609	626
7.2.8.2		Billed Unmetered	0	0	0	0	0	0
7.2.8.3		Unbilled Metered	9 447 791	13 396 500	13,345,632	26	37	37
		Informal Settlement	7 100 951	11 049 660	10,998,792	19	30	30
		Formal metered unbilled	2 346 840	2 346 840	2,346,840	6	6	6
7.2.8.4		Unbilled Unmetered					0	0
		Formal unmetered	8 820 000	8,820,000	8,820,000	24	24	24
	10.2 (g) (i)	Sub-Total: Authorized consumption	234 626 580	278 188 341	288,394,954	643	762	790
		UNACCOUNTED FOR WATER						
7.3.1		Raw water bulk loss	n/a	n/a	n/a	-	15	(-8)
7.2.3/7.2.4		Billing losses	18 267 791	22 216 500	22,165,632	50	61	61
7.2.5		Apparent losses	13 576 781	19 509 978	22,897,637	37	53	63
7.2.5.1		Unauthorised	2 916 779	2 906 686	2,790,210	8	8	8
7.2.5.2		Meter inaccuracies	10 660 002	16 603 292	20,107,427	29	45	55
7.2.6		Real losses	38 827 469	31 305 396	31,403,847	106	86	86
		Mains	27 982 572	20 520 569	20 834 871	57	56	57
		Storage	360 300	403 800	300 100	1	1	1
		Connections	10 484 597	10 381 027	10 268 876	29	28	28
	10.2 (g) (ii)	Sub-Total: Unaccounted for water	70 672 040	73 031 874	76,467,116	194	200	209
		WASTEWATER TREATMENT						
7.2.9	10.2 (a) (iii)	Total received at WWTW	189 485 000	226 757 200	241 810 200	519	621	662
7.2.11		Total discharged	189 485 000	226 757 200	241 810 200	519	621	662
7.2.13		Returned to environment	-	-	-	-	-	-
7.2.14		Recycled	202 781 71	19 119 498	18 119 982	56	52	50
	10.2 (a) (iv)	Quantity of water supplied not discharged to WWTW's	45 141 580	63 911 431	37 210 813	124	175	102

*Note: **Unaccounted Water** is equivalent to Non-Revenue Water (Real losses plus Apparent losses plus Unbilled Authorised Consumption ** **Billing losses** are defined as Unbilled Authorised Consumption (Metered and unmetered)
Need to report on losses between raw water and treated water (Shamile and Willem input)

Table C1.1b: IWA Water Balance for the Overall Water System (CCT WSA boundary only) as at June 2017

(A) System Input 287 030 829 100%	(B) Authorised 234 626 580 81.7%	(D) Billed 216 358 789	(H) Metered 216 358 789	External Customers 26 478 719		(Q) Revenue Water 216 358 789 75.4%
				Internal Customers 189 880 070	Free Basic 50 410 385	
	(E) Unbilled 18 267 791	(J) Metered 9 447 791	(I) Unmetered 0		Informal Settlements 7 100 951	(R) NRW 70 672 040 24.6%
					Formal Metered Unbilled 2 346 840	
					Formal Unmetered 8 820 000	
	(C) Losses (UAW) 52 404 249 18.3%	(F) Apparent Losses 13 576 781	(L) Unauthorised 2 916 779			
			(M) Meter Inaccuracies 10 660 002			
			(N) Mains 27 982 572			
			(O) Storage 360 300			
(G) Real Losses 38 827 469		(P) Connections 10 484 597				

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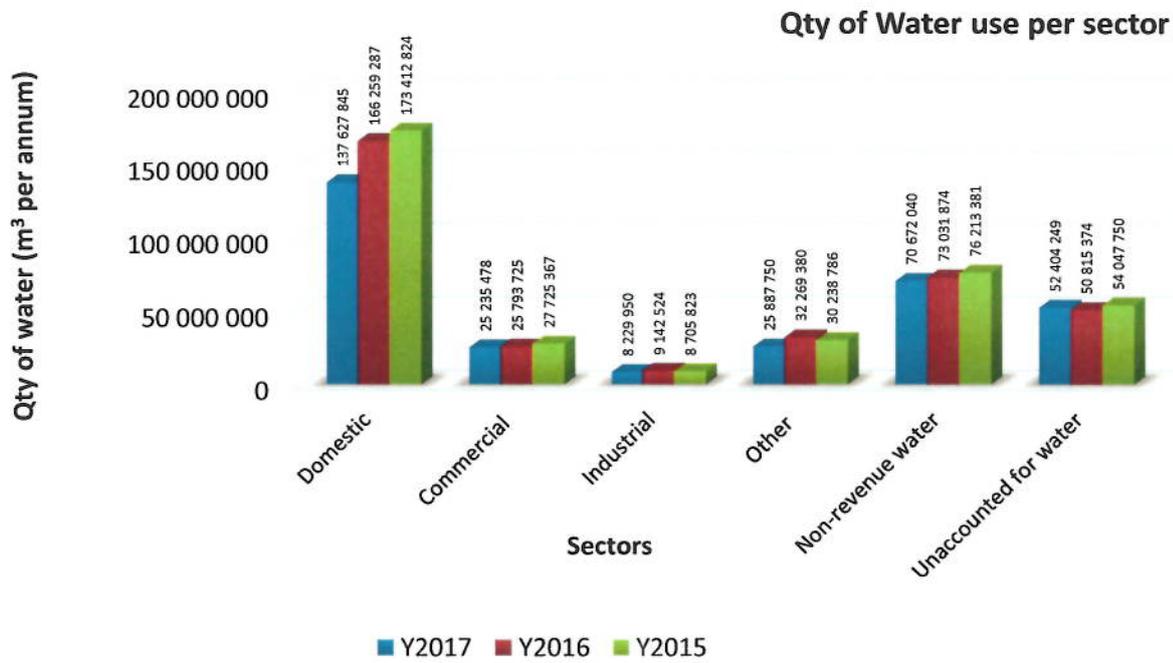


Figure C1.1: Quantity of water services provided / water balance

C2. Water services delivery profile

The 'Regulations relating to compulsory national standards and measures to conserve water', requires in section 10 (2) (b), that the water services authority should report on the levels of services rendered, including at least:

- (i) the number of user connections in each user sector;
- (ii) the number of households provided with water through communal water services works
- (iii) the number of consumers connected to a water reticulation system where pressures rise above 900 kPa at the consumer connection;
- (iv) the number of households with access to basic sanitation services;
- (v) the number of new water supply connections made; and
- (vi) the number of new sanitation connections made.

In turn, section 10 (2) (c) requires that the number provided above, must also be expressed as a percentage of total number connections or households.

The required information is presented in the following sections:

- User connections: addressing regulation item (i), (v) and (vi)
- Residential water services delivery access profile: addressing regulation item (ii) and (iv)
- Residential water services delivery adequacy profile: to align with the WSDP Guide Framework services profile

C2.1 User connection profile

The user connection profile presented in Table C2.1.a and Table C2.1.b below represents the estimated number of residential- and other consumers which are deemed to be provided with levels of services which can potentially be regulated and billed by the municipality (i.e. house- and yard connections). The number of non-residential users has been determined from the billing records of the municipality.

According to the municipality's SAP system, 5 993 new (formal) residential water connections were made in the past financial year.

Table C2.1.a: User Connection Profile Water

WSDP Ref. #	Category of users	Water Services						New Connections Year 0
		Year 2017 FY2016/17		Year 2016 FY2015/16		Year 2015 FY2014/15		
						Nr	%	
-	-	-	-	-	-	-	-	-
3.3	RESIDENTIAL (DOMESTIC)	-	-	-	-	-	-	-
3.3	Metered: Uncontrolled	387 516	59.15%	421 197	64.78%	463 669	72.05%	-33 681
	Metered: Controlled*= WDM	227 972	34.80%	187 754	28.88%	138 605	21.54%	40 218
	Unmetered (flat rate)	0	0.00%	0	0.00%	0	0.00%	0
	Communal water supply(Bulk meters)	320	0.05%	320	-	320	-	0
	Sub-Total: Residential	615 808	94.00%	609 271	93.71%	602 594	93.64%	6 537
3.3	EDUCATION							
	Schools	1 849	0.28%	1 834	0.28%	1 819	0.28%	15
	Tertiary education facilities							
	Sub-Total: Education	1 849	0.28%	1 834	0.28%	1 819	0.28%	15
3.3	HEALTH							
3.3	Clinics	106	0.02%	106	0.02%	106	0.02%	0
3.3	Hospitals	11	0.00%	11	0.00%	11	0.00%	0
	Health Centres	47	0.01%	47	0.01%	47	0.01%	0
	Sub-Total: Health	164	0.03%	164	0.03%	164	0.03%	0
	INSTITUTIONAL							
3.3	Public Institutions							
3.3	Magistrate Offices	11	0.00%	11	0.13%	11	-	0
3.3	Police Stations	61	0.01%	61	0.01%	61	0.01%	0
	Prisons							
	Municipal	13 102	2.00%	12 433	1.91%	12 431	1.93%	669
	Departmental	251	0.04%	146	0.02%	126	0.02%	105
3.3	Government	331	0.05%	327	0.05%	311	0.05%	4
3.3	Sub-Total: Institutional	13 756	2.10%	12 978	2.00%	12 940	2.01%	778
	INDUSTRIAL							
	Dry industries							
3.3	Wet industries							
3.3	Sub-Total: Industrial	4 464	0.68%	4 462	0.69%	4 466	0.69%	2
	COMMERCIAL							
	Businesses							
	Office Buildings							
	Sub-Total: Commercial	13 018	1.99%	12 972	2.00%	13 134	2.04%	46
	MINING							
	Sub-Total: Mining							
	OTHER							
	Agriculture							
	Churches	1 577	0.24%	1 567	0.24%	1 567	0.24%	10
	Effluent	676	0.10%	676	0.10%	676	0.11%	0
	Other	3 817	0.58%	6 236	0.96%	6 196	0.96%	-2 419
	Unknown	0	0.00%	-	0.00%		0.00%	0
	Sub- Total: Other	6 070	0.93%	8 479	1.30%	8 439	1.31%	-2 409
	Total	655 129	100.00%	650 160	100.00%	643 556	100.00%	4 945

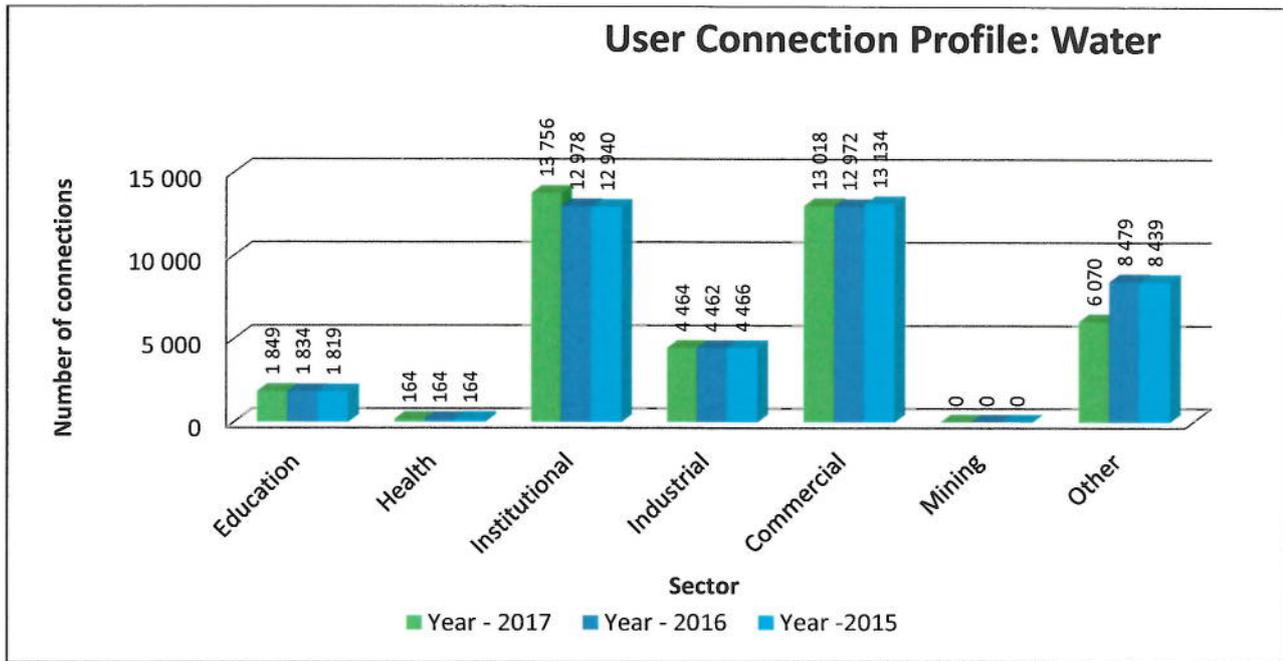


Figure C2.1.1 (a): User connection profile for water

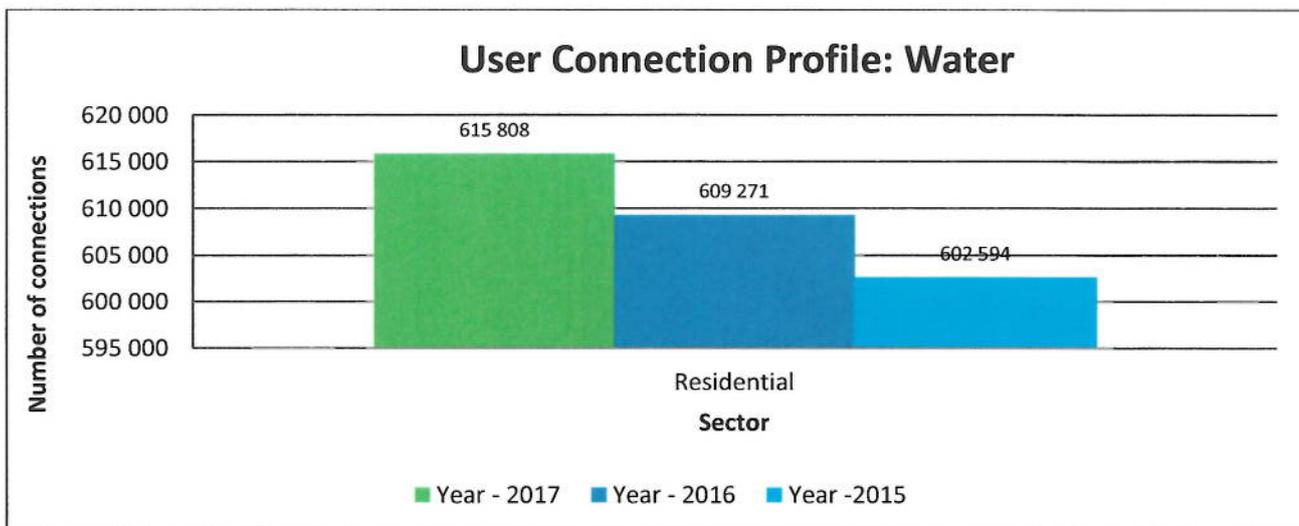


Figure C2.1.1 (b): User connection profile for water

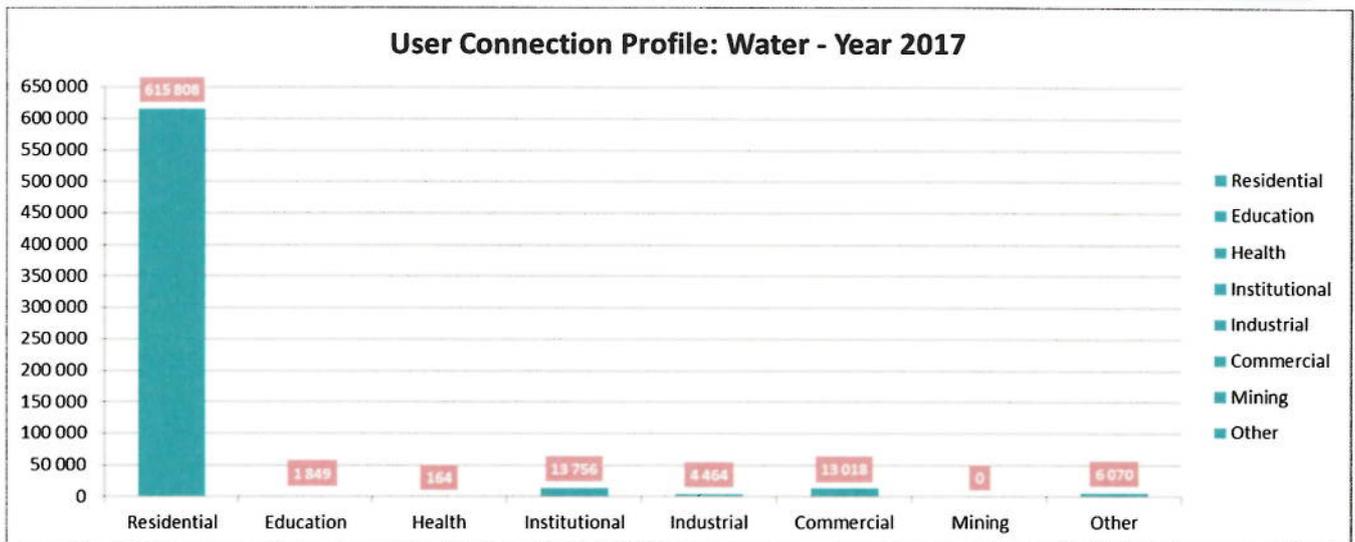


Figure C2.1.2: User connection distribution for water - Year 2017

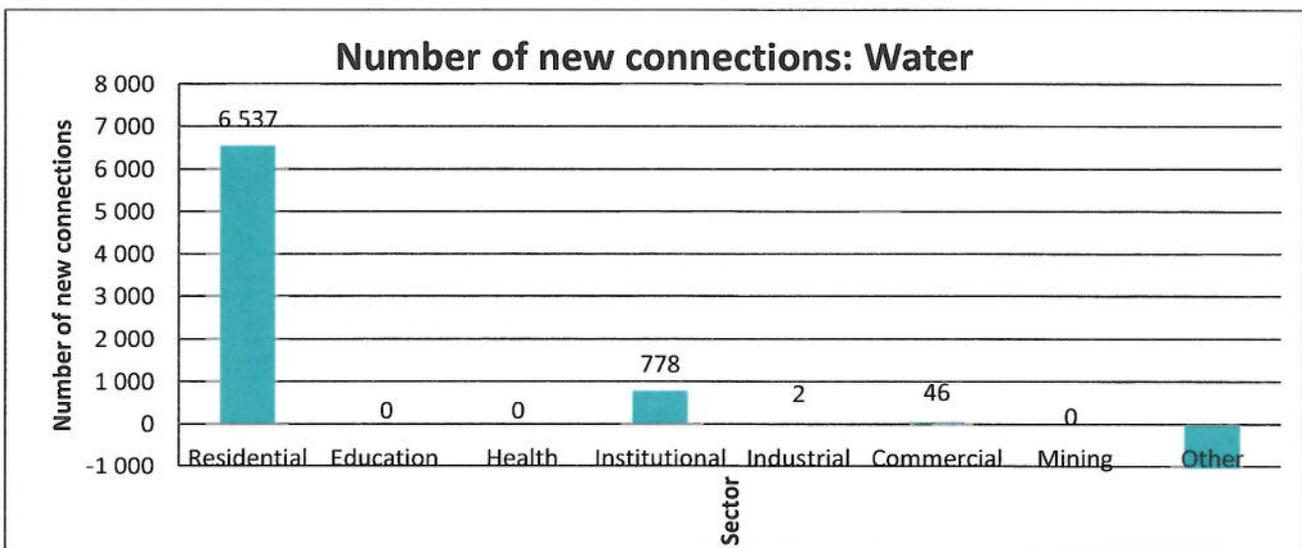


Figure C2.1.3: New connections for water

Table C2.1. b: User Connection Profile Wastewater

WSDP Ref. #	Category of users	Wastewater Services						
		Year 2017 FY2016/17		Year 2016 FY2015/16		Year 2015 FY2014/15	New Connections Year 0	
		Nr	%	Nr	%	Nr	%	Nr
3.3	RESIDENTIAL (DOMESTIC)							
3.3	Metered: Uncontrolled	605 395	94.63%	598 800	94.4%	593 318	94.4%	6 595
	Metered: Controlled*	0		0		0		
	Unmetered (flat rate)	0		0		0		
	Sub-Total: Residential	605 395	94.63%	598 800	94.4%	593 318	94.4%	6 595
3.3	EDUCATION							
	Schools	1 849	0.29%	1 353	0.2%	1 353	0.2%	15
	Tertiary education facilities							
	Sub-Total: Education	1 849	0.29%	1 353	0.2%	1 353	0.2%	15
3.3	HEALTH							
3.3	Clinics	106	0.02%	106	0.0%	106	0%	0
3.3	Hospitals	11	0.00%	11	0.0%	11	0%	0
	Health Centres	47	0.01%	47	0.0%	47	0%	0
	Sub-Total: Health	164	0.03%	164	0.0%	164	0.0%	0
	INSTITUTIONAL							
3.3	Public Institutions							
3.3	Magistrate Offices	11	0.00%	11	0.0%	11	0%	0
3.3	Police Stations	61	0.01%	61	0.0%	61	0%	0
	Prisons							
	Municipal	10 478	1.64%	9 813	1.5%	9 488	1.5%	665
	Departmental	58	0.01%	36	0.0%	33	0.0%	22
3.3	Government	920	0.14%	945	0.1%	966	0.2%	-25
3.3	Sub-Total: Institutional	11 528	1.80%	10 866	1.7%	10 559	1.7%	662
	INDUSTRIAL							
	Dry industries							
3.3	Wet industries							
3.3	Sub-Total: Industrial	4 223	0.66%	4 230	0.7%	4 242	0.7%	-7
	COMMERCIAL							
	Businesses							
	Office Buildings							
	Sub-Total: Commercial	12 222	1.91%	12 179	1.9%	12 370	2.0%	43
	MINING							
	Sub-Total: Mining							
	OTHER							
	Agriculture							
	Churches	1 577	0.25%	1 566	0.2%	1 567	0.2%	11
	Effluent	716	0.11%	669	0.1%	676	0.1%	24
	Other	2 100	0.33%	4 286	0.7%	4 371	0.7%	-116
	Unknown	0						
	Sub- Total: Other	4 393	0.69%	6 521	1.0%	6 614	1.0%	-81
	Total	639 774	100%	634 113	100%	628 527	100%	7 227

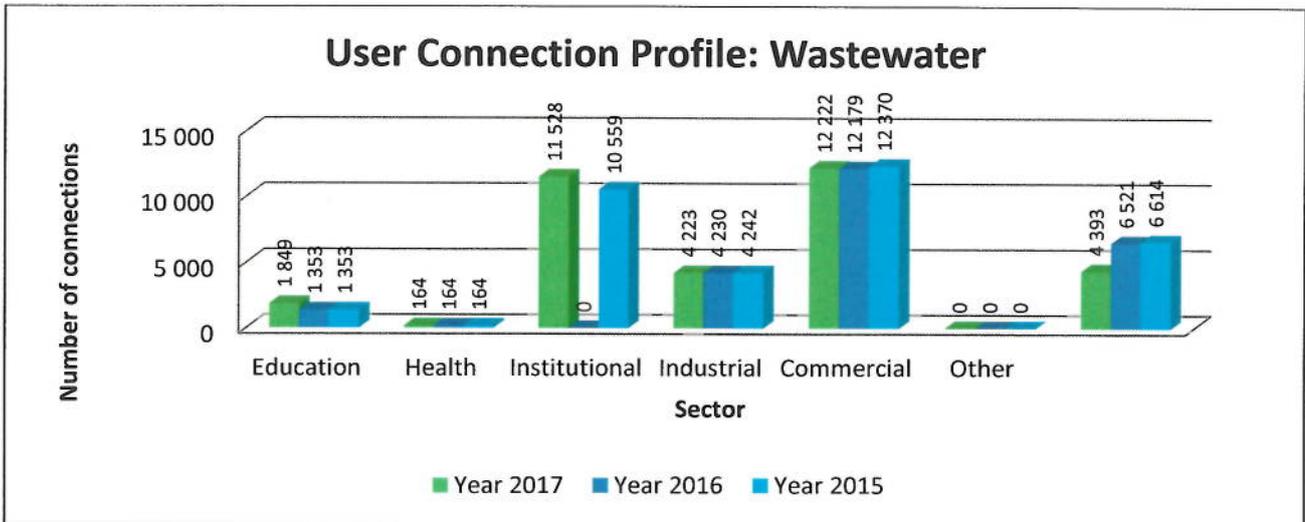


Figure C2.1.4 (a): User connection profile for wastewater

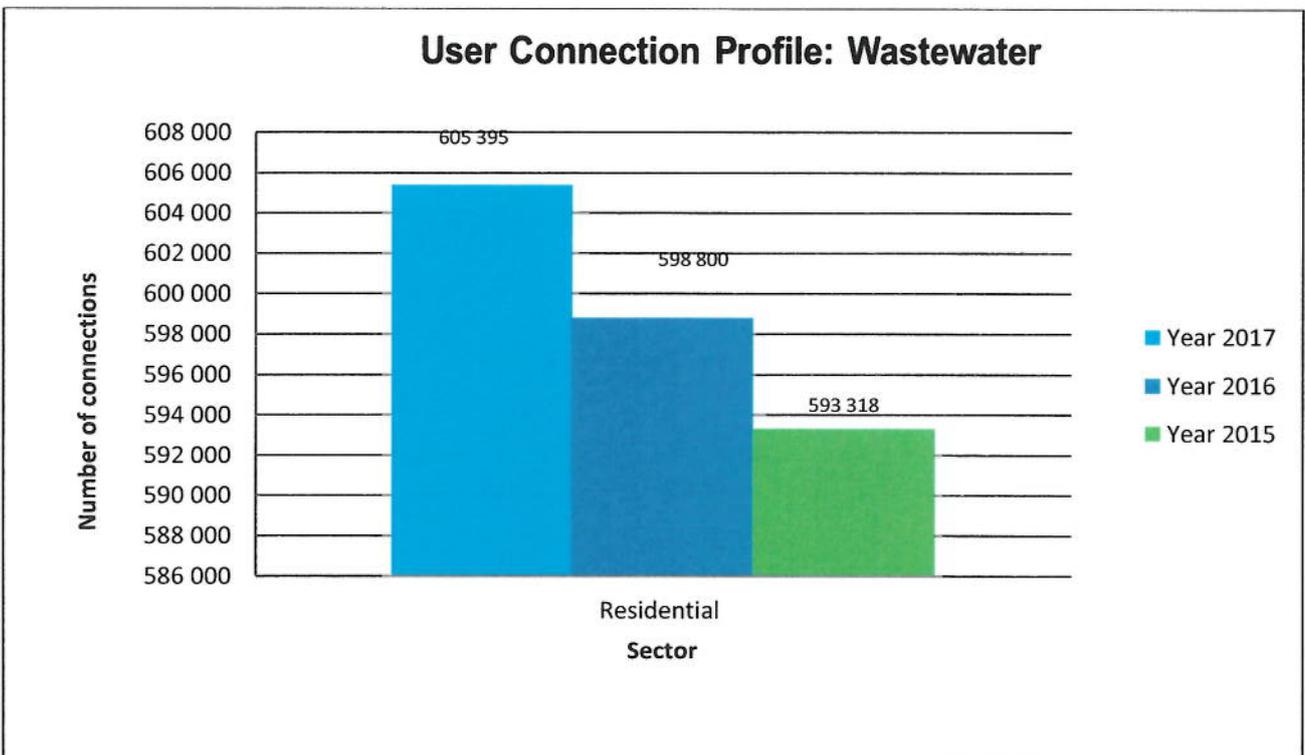


Figure C2.1.4 (b): User connection profile for residential

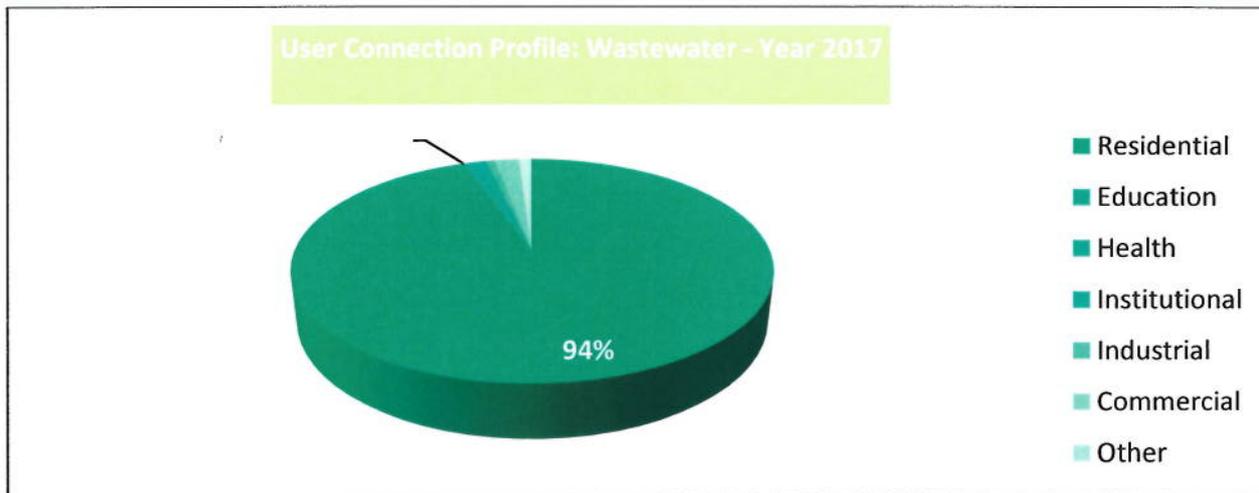


Figure C2.1.5: User connection distribution for wastewater - Year 2017

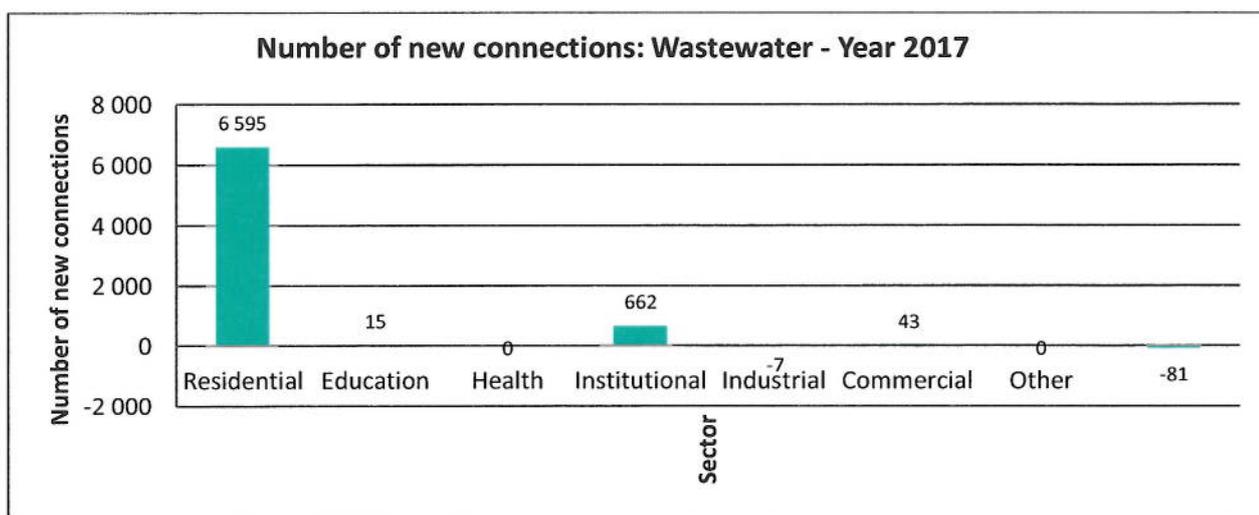


Figure C2.1.6: New connections for wastewater –Year 2017

C2.2 Residential water services delivery access profile

The entire population of Cape Town, both in formal and informal settlements, receives potable water service levels that meet the National Minimum Standards as required by the Water Services Act 108 (of 1997).

Whilst the City provides full flush toilets to informal settlements where possible, it also provides various types of alternative sanitation technologies. This is done in order to address the challenges described in the Introduction. Some of these alternative sanitation options are seen as a top up service, or a 1-on-1 provision and some can service more than one household. In terms of meeting the National Guidelines of adequate sanitation the City fully complies. In order to improve service delivery to the Departments’ own internal higher standard, and maintain standard in line with additional influx of informal settlement customers, the City continues to provide the various alternative sanitation options.

The maintenance of these sanitation services often carries high cost due to frequent cleaning, servicing and repair or replacement due to vandalism. It places a heavy burden on the department’s finance and requires a national initiative to be implemented such as a significant improvement in the level of funding received from the Equitable Share. In the case of the City of Cape Town, the cost of these services is to a large extent being cross-subsidised by tariff income from other customers.

As a caring city that ensures service delivery to its most vulnerable residents, the Water and Sanitation Department has spent R336 million directly on services to informal settlements in the 2016/17 financial year.

The money has mainly been earmarked for:

- increasing the toilet and tap provisions
- maintenance of sanitation and water facilities
- cleaning and emptying of alternative sanitation
- the janitorial programme

These amounts however do not include the free provision of water to informal settlements, as well as the removal of wastewater. These free services have an estimated value of more than R143 million in 2016/17 and need to be recovered via cross-subsidisation. It also excludes new or existing bulk infrastructure to service informal settlements, or wastewater treatment and infrastructure for treatment.

Thanks to a continued increase in the budget for water and sanitation in informal settlements the City has provided over 54 000 toilets across Cape Town by the end of June 2017, while more than 12 000 taps have also been provided.

Table C2.2 (a): Residential water services delivery access profile: Water

Census Category	Description	Year 2017		Year 2016		Year 2015	
		FY2016/17		FY2015/16		FY2014/15	
		Nr	%	Nr	%	Nr	%
	WATER (ABOVE MIN LEVEL)						
Piped (tap) water inside dwelling/institution	House connections	988 643	86.2%	898 557	86.2%	967 313	86.2%
Piped (tap) water inside yard	Yard connections	0	0.0%	0	0.0%	0	0.0%
Piped (tap) water on community stand: distance less than 200m from dwelling/institution	Standpipe connection < 200 m	158 433	13.8%	156 755	13.8%	155 015	13.8%
Sub-Total: Minimum Service Level and Above		1 147 076	100%	1 134 925	100%	1 122 328	100%
Piped (tap) water on community stand: distance between 200m and 500m from dwelling/institution	Standpipe connection: > 200 m < 500 m	0	0%	0	0%	0	0%
Piped (tap) water on community stand: distance between 500m and 1000m (1km) from dwelling /institution	Standpipe connection: > 500 m < 1 000 m	0	0%	0	0%	0	0%

Piped (tap) water on community stand: distance greater than 1000m (1km) from dwelling/institution	Standpipe connection: > 1 000 m	0	0%	0	0%	0	0%
No access to piped (tap) water	No services	0	0%	0	0%	0	0%
Sub-Total: Below Minimum Service Level		0	0%	0	0%	0	0%
Total number of households		1 147 076	100%	1 134 925	100%	1 122 328	100%

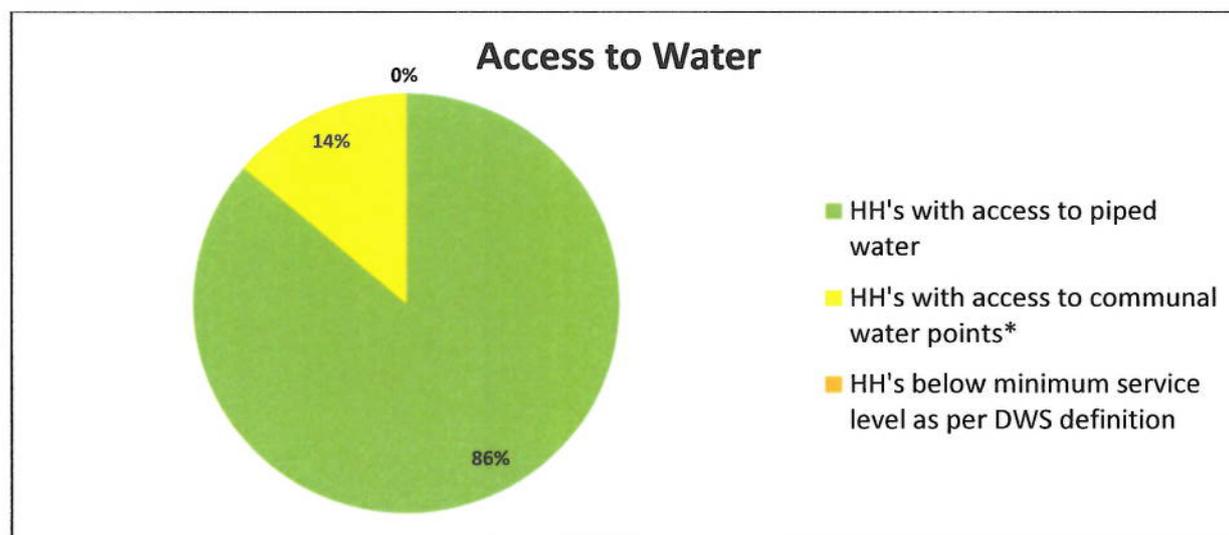


Figure C2.2.1: Household water access profile

*Means access to 25 litres of potable water per day supplied within radius 200m of a household with a minimum flow of 10 litres per minute

Toilets provision in Informal Settlements of which households estimated to have access to full flush: 60 695 (13/14); 73 940 (14/15); 74 090 (15/16) and 78 530 (16/17) at 1 toilet to 5 households. Close to 50% of informal settlement households is estimated to have access to full flush toilets at this ratio. All sanitation option, including full flush, chemical and container toilets are available on a communal basis. Portable flush sanitation is provided as one toilet per individual household.

Table C2.2 (b): Residential water services delivery access profile: Sanitation

Census Category	Description	Year 2017		Year 2016		Year 2015	
		FY2016/17		FY2015/16		FY2014/15	
		Nr	%	Nr	%	Nr	%
SANITATION (ABOVE MIN LEVEL AS DEFINED BY DWS IN THIS TEMPLATE)							
Flush toilet (connected to sewerage system)	Waterborne	1 063 612	92.72%	1 059 560	93.36%	1 041 253	92.78%
	Waterborne: Low Flush	0	0	0	0	0	0
Flush toilet (with septic tank)	Septic tanks / Conservancy	3 561	0.31%	3 561	0.31%	3 561	0.32%
Chemical toilet	Non-waterborne (above min. service level)	31 295	2.73%	29 585	2.61%	29 955	2.67%
Pit toilet with ventilation (VIP)		985	0.09%	1 435	0.13%	65	0.01%
Other		47 406	4.13%	40 567	3.57%	46 266	4.12%
Sub-Total: Minimum Service Level and Above		1 146 859	99.98%	1 134	99.98	1 121	99.89%

				708		100	
SANITATION (BELOW MIN LEVEL AS DEFINED BY DWS IN THIS TEMPLATE)							
Pit toilet without ventilation	Pit toilet	0	0.00%	0	0	1005	0.09%
Bucket toilet	Bucket toilet	217	0.02%	217	0.02%	223	0.02%
Other toilet provision (below min. service level)	Other	0	0.00%	0	0.00%	0	0.00%
No toilet provisions	No services	0	0.00%	0	0.00%	0	0.00%
Sub-Total: Below Minimum Service Level		217	0.02%	217	0.02	1 228	0.11%
Total number of households		1 147 076	100%	1 134 925	100%	1 122 328	100%

The City, as at June 2017, was servicing 217 black buckets (25 l). These are in the areas of Boys Town and Sir Lowry’s Pass (Morkel’s Cottage, Rasta Camp, Pine Town and Uitkyk), partly on City property and partly on private land. As the City wants to eradicate these remaining black buckets, residents using the black buckets have been offered alternative sanitation technologies e.g. portable flush toilets, but the offer has been declined. The City will therefore continue to service the remaining black buckets, but these are therefore not seen as a service below the National Standards, as alternative sanitation technologies are available and accessible. Most of the areas mentioned above are currently part of Human Settlements development projects and therefore the remaining buckets will be eradicated as the residents are absorbed into new housing initiatives.

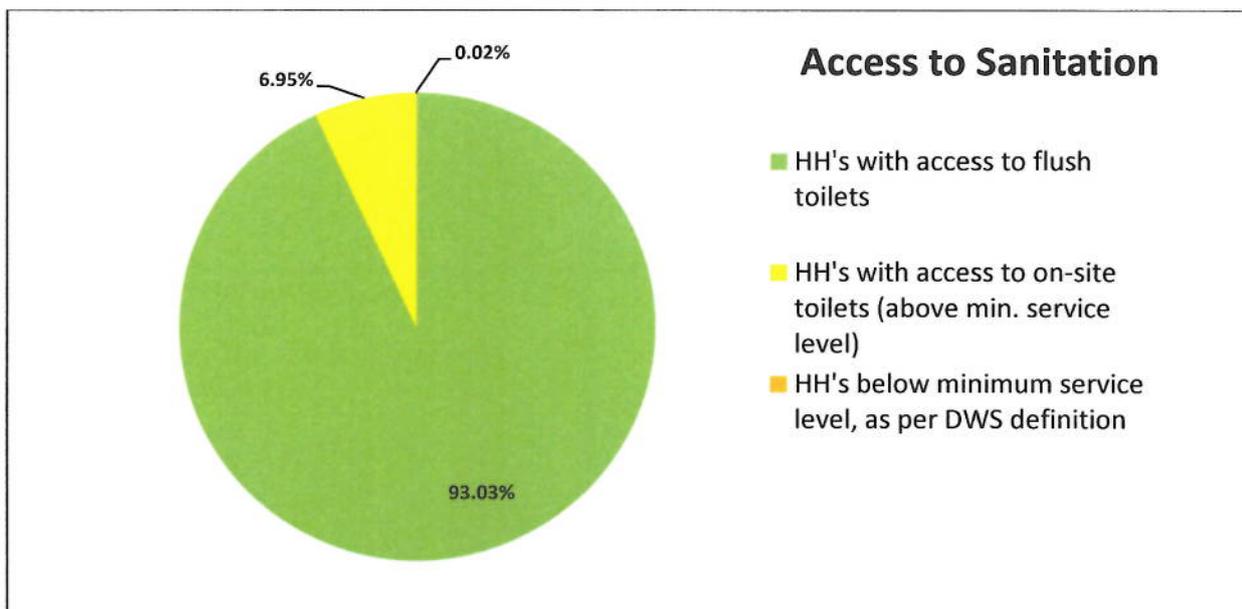


Figure C2.2.2: Household sanitation access profile qualify

C2.3 Residential water services delivery adequacy profile

All residents, both formal and informal receive services that meet and/ or exceed the basic minimum levels of service.

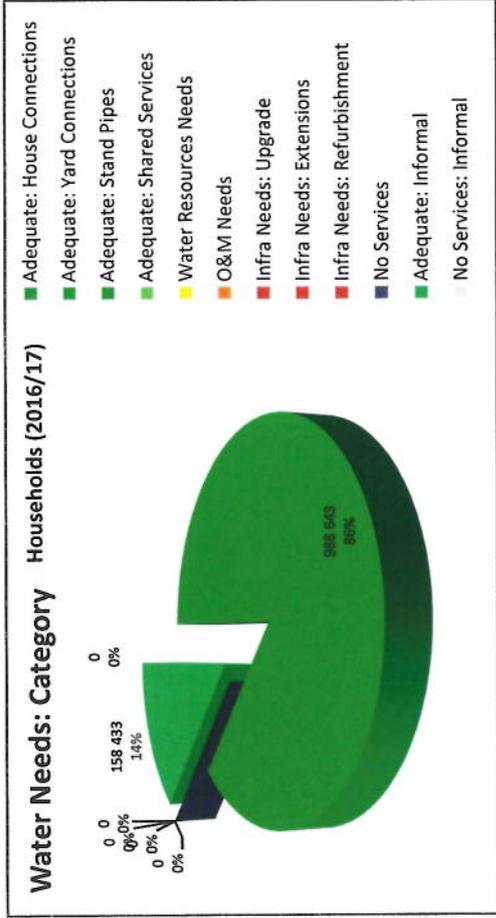
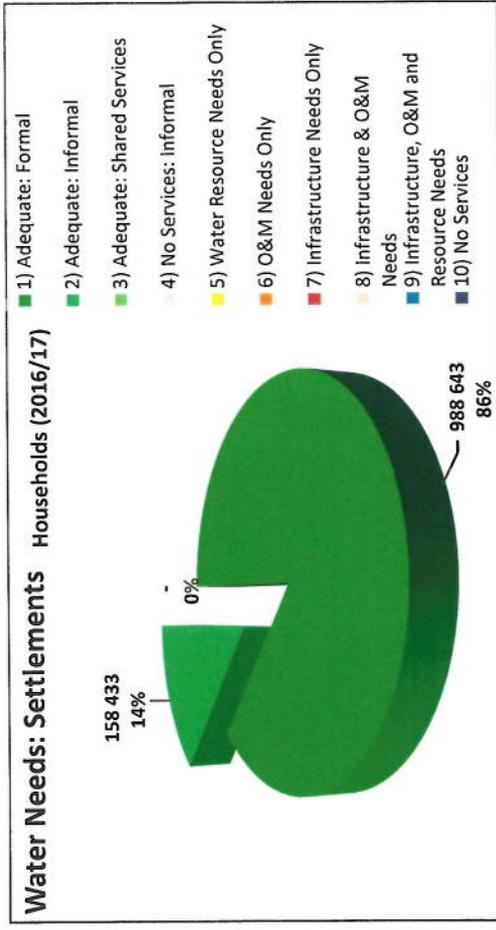
The Integrated Planning, Strategy and Information Management Unit within the Water Demand Management and Strategy Branch has and is responsible for the development and updating of a Master Plan for Water and Sanitation infrastructure which covers a forward plan, for at least the following 20 years, assessing infrastructure needs for the future.

The Integrated Master Plan cycle update was completed at the end of November 2014. The main focus of the Master Planning process was to highlight infrastructure upgrades and new requirements in order to cater for densification and future developments.

Table C2.3 (a): Residential water services delivery adequacy profile (Water)

Water Categorisation	Number of settlements	FORMAL										INFORMAL							
		Adequate			Shared Services			Water Resource needs		O & M Needs	Infrastructure Needs			Adequate		No services			
		House Connections	Yard Connections	Stand Pipes	Shared Services	Water Resource needs	O & M Needs	Upgrades	Extensions	Refurbishment	HH	HH	HH	HH	HH	HH	HH	H	%
1		988 643	100%	-															
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
Total Household Interventions required		988 643	0	0	0	0	0	0	0	0	0	0	0	0	0	0	158 433	0	100%

Table C2.3 (a): Residential water services delivery adequacy profile (Water)

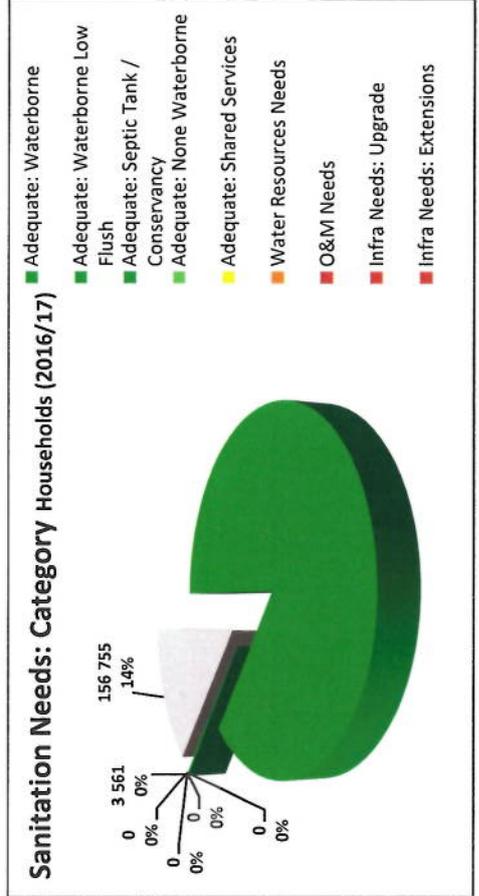
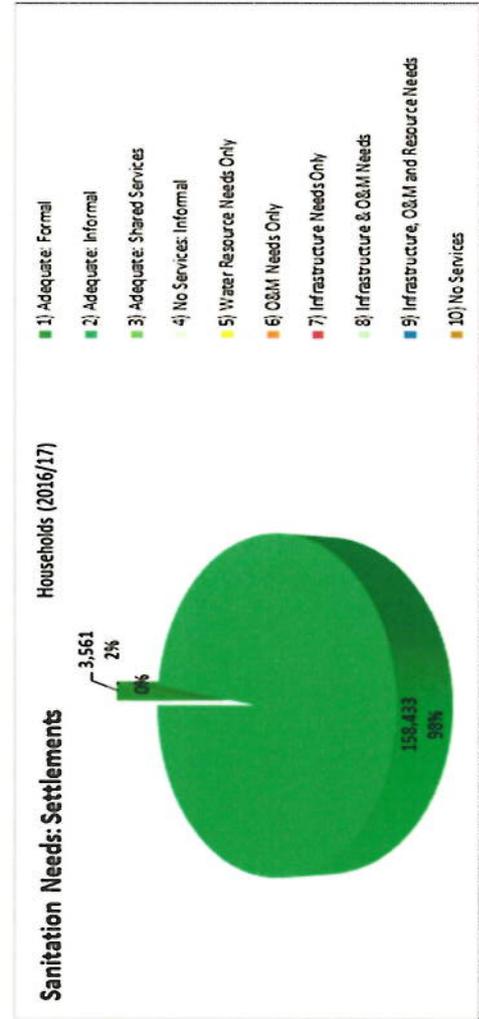


1	Adequate	Adequate: Shared services	5	Water Resources Needs Only	7	Infrastructure Needs Only	9	Infrastructure, O&M & Resource Needs
2	Adequate: Informal	No Services: Formal	6	O & M Needs Only	8	Infrastructure & O&M needs	10	No Services
3								
4								

Table C2.3 (b): Residential water services delivery adequacy profile (Sanitation)

Water Categorisation	Number of settlements	FORMAL										INFORMAL								
		Adequate				Water Resource needs		O & M Needs		Infrastructure Needs			No services		Adequate		No services			
		Waterborne	Waterborne Low flush	Septic Tank/ Conservancy	None Waterborne	Shared Services	HH	%	HH	%	HH	%	Upgrades	Extensions	Refurbishment	HH	%	HH	%	
1	5	985 082	99.6%			3,561	0.4%										158 433	100%		
2	1																			
3	49																			
4	0																			
5	0																			
6	0																			
7	6																			
8	0																			
9	0																			
10	2																			
Total Household Interventions required		985 082	0	3,561	0	0	0	0	0	0	0	0	0	0	0	0	158 433	0	0	0

Table C2.3 (b): Residential water services delivery adequacy profile (Sanitation)



1	Adequate	3	Adequate: Shared services	5	Water Resources Needs Only	7	Infrastructure Needs Only	9	Infrastructure, O&M & Resource Needs
2	Adequate: Informal	4	No Services: Formal	6	O & M Needs Only	8	Infrastructure & O&M needs	10	No Services

C3. Cost recovery and free basic services

The 'Regulations relating to compulsory national standards and measures to conserve water', requires in section 10 (2) (d), that the water services authority should report on cost recovery, including at least:

- (i) the tariff structures for each user sector;
- (ii) the income collected expressed as a percentage of total costs for water services provided; and
- (iii) unrecovered charges expressed as a percentage of total costs for water services provided.

In turn, section 10 (2) (e) requires the water services authority to report on meter installation and meter testing, including at least:

- (i) the number of new meters installed at consumer installations; and
- (ii) the number of meters tested and the number of meters replaced as expressed as a percentage of the total number of meters installed at consumer connections.

The Regulations, furthermore specifies in section 10 (2) (b) that the number of households with access to free basic sanitation services should be recorded. A requirement of the MFMA Municipal Annual Report is that municipalities should also report the number of customers, receiving Free Basic services. In order to provide this figure to the Municipal Annual Report, this section has been expanded to include reference to the number of households receiving access to free basic water.

The information as required above, is presented in the following sub-sections:

- Tariffs: addressing regulation item 10 (2) (d) (i)
- Metering, Billing and Free Basic Services: addressing regulation items 10(2) (e) (i) and (ii) as well as regulation item 10(2) (b) (v)
- Revenue collection and cost recovery: addressing regulation items 10 (2) (d) (ii) and (iii)

The details for each of these sub-sections are further discussed below.

C3.1 Tariffs

Tariff increases implemented have been set higher than inflation during the last number of years due to the escalated focus on repairs and maintenance of current infrastructure as well as the growth in the capacity requirement in the capital infrastructure programme. City of Cape Town's block tariff structure for the various financial years is presented within the tables below.

As Water and Sanitation department get closer to requiring an augmentation scheme, the tariffs will have to be reviewed in order to cover costs of augmentation. This means that constantly faced with a decision of when, what method and cost of any scheme that will be implemented.

The City implemented Water Restrictions level 3b since 01 February 2017 due to the persistent drought. During the 2016/17 financial year, Water and Sanitation Department implemented higher level of restrictions, from a saving of 20% from July-November 2016 and a 30% saving from December - June 2017 for both Water and Sanitation services"

Table C3.1. a: Tariffs for water from July 2016 – November 2016 with 20% reduction in demand (during restrictions only)

Nr	Category	Sector	Unit	Tariff (VAT excluded)			
				Year 2017	Year 2016	Year - 2015	% Increase
				FY2016/17 (R)	FY2015/16 (R)	FY2014/15 (R)	Year 2017
1.1	BASIC CHARGES						
	Not Applicable						
2	VOLUME CHARGES						
	Step 1 (0-6 kℓ)	Domestic Full	R/kl	-	-	-	
	Step 2 (+6-10.5 kℓ)			13.75	10.22	9.71	34.54%
	Step 3 (+10.5-20 kℓ)			17.56	16.00	13.92	9.75%
	Step 4 (+20-35 kℓ)			28.64	26.09	20.62	9.75%
	Step 5 (+35-50 kℓ)			43.71	39.82	25.47	9.75%
	Step 6 (+50 kℓ)			81.92	74.64	33.59	9.75%
	Step 1 (0-6 kℓ)	Domestic cluster	R/kl	-	-	-	
	Step 2 (+6-10.5 kℓ)			13.75	12.53	11.90	9.75%
	Step 3 (+10.5- 20kℓ)			17.56	16.00	13.92	9.75%
	Step 4 (+20-35kℓ)			28.64	26.09	20.62	9.75%
	Step 5 (+35-50 kℓ)			43.71	39.82	25.47	9.75%
	Step 6 (+50kℓ)			81.92	74.64	33.59	9.75%
	Step 1 (0-6 kℓ)	Domestic Backyarders	R/kl	-	-	-	
	Step 2 (+6-10.5 kℓ)			13.75	10.22	8.75	34.54%
	Commercial	Commercial	R/kl	19.14	17.44	13.51	9.75%
	Industrial	Industrial	R/kl	19.14	17.44	13.51	9.75%
	OTHER						
	Schools/sport	Schools/sport	R/kl	16.92	15.42	11.94	9.75%
	Government	Government	R/kl	18.17	16.56	12.83	9.75%
	Municipality	Municipality	R/kl	16.92	15.42	11.94	9.75%
	Miscellaneous	Miscellaneous	R/kl	18.17	16.56	12.83	9.75%
	Homeless people shelters / Homes catering for the health of physically or mentally challenged individuals						
	Step 1 (0 ≤ 0.75 kl per person)			0.00	0.00	0.00	
	Step 2 (0.75 kl per person)			16.92	15.42	13.26	9.75%
	Vulnerable Groups (Subsistence farming)						
	Step 1 (0 ≤ 10 kl)			0.00	0.00	0.00	
	Error! Not a valid link.			The normal tariff for the premises on which the facility is situated	0.00	0.00	
	Misc. (external)	Miscellaneous (external)	R/kl	21.71	19.78	17.01	9.75%
	Bulk Tariff		R/kl	4.56	4.30	3.70	5.99%
	OTHER CHARGES (DEFINE CATEGORY)						
	15mm-20mm	Fixed Service Charge (All consumer groups other than domestic, including all	per month	14.59	13.77	13.07	5.90%
	25mm-40mm			51.46	48.60	45.96	5.90%
	50mm-90mm			130.70	123.42	116.75	5.90%

100mm-140mm	Spring water and Treated Effluent Users)	157.19	148.42	140.44	5.90%
150mm		270.26	255.18	214.40	5.90%
>150mm		362.81	342.63	324.12	5.90%
Temporary Connections		6 755.36	6379.00	5704.00	5.90%
New Connections					
25mm complete (stop cock+meter box+ meter		6 337.98	5 984.91	5 662.19	5.90%
40mm complete (stop cock+meter box+ meter		10 584.91	9 995.18	9 456.14	5.90%
50 mm complete (stop cock+meter box+ meter)		16 417.89	15 503.25	14 667.19	5.90%
*Above Tariffs and additional Tariffs can be sourced via the following link Water and Sanitation Tariffs					

Table C3.1. b: Tariffs for water from December 2016 – June 2017 with 30% reduction in demand (during restrictions only)

Nr	Category	Sector	Unit	Tariff (VAT excluded)			% Increase Year 2017
				Year 2017	Year 2016	Year - 2015	
				FY2016/17 (R)	FY2015/16 (R)	FY2014/15 (R)	
1.1	BASIC CHARGES						
	Not Applicable						
2	VOLUME CHARGES						
	Step 1 (0-6 kℓ)	Domestic Full	R/kl	-	-	-	
	Step 2 (+6-10.5 kℓ)			14.51	10.79	9.74	34.48%
	Step 3 (+10.5-20 kℓ)			20.65	18.81	16.93	9.75%
	Step 4 (+20-35 kℓ)			35.93	32.74	29.47	9.75%
	Step 5 (+35-50 kℓ)			58.25	53.08	47.81	9.75%
	Step 6 (+50 kℓ)			175.58	159.98	144.12	9.75%
	Step 1 (0-6 kℓ)	Domestic cluster	R/kl	-	-	-	
	Step 2 (+6-10.5 kℓ)			14.51	13.22	11.93	9.75%
	Step 3 (+10.5- 20kℓ)			20.65	18.81	16.93	9.75%
	Step 4 (+20-35kℓ)			35.93	32.74	29.47	9.75%
	Step 5 (+35-50 kℓ)			58.25	53.08	47.81	9.75%
	Step 6 (+50kℓ)			175.58	159.98	144.12	9.75%
	Step 1 (0-6 kℓ)	Domestic Backyarders	R/kl	-	-	-	
	Step 2 (+6-10.5 kℓ)			14.51	10.79	9.74	34.48%
	Commercial	Commercial	R/kl	22.24	20.26	18.25	9.75%
	Industrial	Industrial	R/kl	22.24	20.26	18.25	9.75%
	OTHER						
	Schools/sport	Schools/sport	R/kl	19.65	17.91	16.14	9.75%
	Government	Government	R/kl	21.11	19.24	17.37	9.75%
	Municipality	Municipality	R/kl	19.64	17.90	16.14	9.75%
	Miscellaneous	Miscellaneous	R/kl	21.11	19.24	17.37	9.75%
	Homeless people shelters / Homes catering for the health of physically or mentally challenged individuals						
	Step 1 (0 ≤ 0.75 kl per person)			0.00	0.00	0.00	
	Step 2 (0.75 kl per person)			19.65	17.91	16.14	9.75%
	Vulnerable Groups (Subsistence farming)						
	Step 1 (0 ≤ 10 kl)			0.00	0.00	0.00	
	Error! Not a valid link.			The normal tariff for the premises on	0.00	0.00	

				which the facility is situated			
	Misc. (external)	Miscellaneous (external)	R/kl	25.24	23.00	20.70	9.75%
	Bulk Tariff		R/kl	5.31	5.01	4.74	5.99%
OTHER CHARGES (DEFINE CATEGORY)							
	15mm-20mm	Fixed Service Charge (All consumer groups other than domestic, including all Spring water and Treated Effluent Users)	per month	14.59	13.77	13.07	5.90%
	25mm-40mm			51.46	48.60	45.96	5.90%
	50mm-90mm			130.70	123.42	116.75	5.90%
	100mm-140mm			157.19	148.42	140.44	5.90%
	150mm			270.26	255.18	241.40	5.90%
	>150mm			362.81	342.63	324.12	5.90%
	Temporary Connections			6 755.36	6379.00	5 704.00	5.90%
	<u>New Connections</u>						
	25mm complete (stop cock+meter box+ meter)			6 337.98	5 984.91	5 351.75	5.90%
	40mm complete (stop cock+meter box+ meter)			10 584.91	9 995.18	8 937.72	5.90%
	50 mm complete (stop cock+meter box+ meter)			16 417.89	15 503.25	13 863.16	5.90%
*Above Tariffs and additional Tariffs can be sourced via the following link Water and Sanitation Tariffs							

Table C3.1.c: Tariffs for Sanitation from July 2016 – November 2016 with 20% reduction in demand (during restrictions only)

Nr	Category	Sector	Unit	Tariff (VAT excluded)			% increase Year 2017
				Year 2017	Year 2016	Year - 2015	
				FY2016/17 (R)	FY2015/16 (R)	FY2014/15 (R)	
1	<u>BASIC CHARGES</u>						
2	<u>VOLUME CHARGES</u>						
	0-4.2 kℓ	Domestic Full	R/kℓ			-	-
	+4.2-7.35 kℓ			11.61	9.64	9.16	20.44%
	+7.35-14 kℓ			20.52	18.69	16.25	9.75%
	+14-24.5 kℓ			24.69	22.49	17.77	9.75%
	+24.5-35 kℓ			32.00	29.16	18.66	9.75%
	Commercial -Standard	Commercial	R/kℓ	14.70	13.39	11.53	9.7%
	Commercial –COCT Oxidation dams			13.84	12.61	10.84	9.75%
	Industrial-Standard	Industrial	R/kℓ	14.70	13.39	11.53	9.75%
	Industrial- COCT Oxidation dams			13.84	12.61	10.84	9.75%
	Departmental/Municipal	Departmental/Municipal	R/kℓ	13.54	12.34	10.61	9.75%
	0-4.2 kℓ	Domestic Cluster	R/kℓ	0.00	0.00	0.00	
	+4.2-7.35 kℓ			11.61	10.58	10.05	20.44%
	+7.35-14 kℓ			20.52	18.68	16.25	9.75%
	+14-24.5 kℓ			24.69	22.50	17.77	9.75%
	+24.5-35 kℓ			32.00	29.16	18.66	9.75%

3						
New Connection						
100mm connections		R/kℓ	1200.88	1 133.95	1072.81	5.90%
150mm connections		R/kℓ	1438.77	1 358.60	1285.35	5.90%
Clearing domestic sewerage blockages (office Hours)		R/kℓ	421.75	398.25	376.75	5.90%
Testing Sewers		R/test	745.88	704.30	666.32	5.90%
*Above Tariffs and additional Tariffs can be sourced via the following link Water and Sanitation Tariffs						

Table C3.1. d: Tariffs for Sanitation from December 2016 – June 2017 with 30% reduction in demand (during restrictions only)

Nr	Category	Sector	Unit	Tariff (VAT excluded)			% increase Year 2017
				Year 2017	Year 2016	Year - 2015	
				FY2016/17 (R)	FY2015/16 (R)	FY2014/15 (R)	
1	BASIC CHARGES						
2	VOLUME CHARGES						
	0-4.2 kℓ	Domestic Full	R/kℓ	-	-	-	-
	+4.2-7.35 kℓ			12.26	10.18	9.21	20.45%
	+7.35-14 kℓ			24.10	21.96	19.74	9.75%
	+14-24.5 kℓ			30.96	28.21	25.44	9.75%
	+24.5-35 kℓ			42.67	38.88	35.00	9.75%
	Commercial -Standard	Commercial	R/kℓ	17.09	15.57	14.04	9.75%
	Commercial –COCT Oxidation dams			16.08	14.65	13.16	9.75%
	Industrial-Standard	Industrial	R/kℓ	17.09	15.57	14.04	9.75%
	Industrial- COCT Oxidation dams			16.08	14.65	13.16	9.75%
	Departmental/Municipal	Departmental/Municipal	R/kℓ	15.74	14.35	12.89	9.75%
	0-4.2 kℓ	Domestic Cluster	R/kℓ	0.00	0.00	0.00	
	+4.2-7.35 kℓ			12.26	11.17	9.21	9.75%
	+7.35-14 kℓ			24.10	21.96	19.74	9.75%
	+14-24.5 kℓ			30.96	28.21	25.44	9.75%
	+24.5-35 kℓ			42.67	38.88	35.00	9.75%
3	New Connection						
	100mm connections		R/kℓ	1200.88	1 133.95	1072.81	5.90%
	150mm connections		R/kℓ	1438.77	1 358.60	1285.35	5.90%
	Clearing domestic sewerage blockages (office Hours)		R/kℓ	421.75	398.25	376.75	5.90%
	Testing Sewers		R/test	745.88	704.30	666.32	5.90%
*Above Tariffs and additional Tariffs can be sourced via the following link Water and Sanitation Tariffs							

C3.2 Metering, Billing and Free Basic Services

The first 6 kilolitres of water supplied to all residential dwellings in the municipal area and the first 4.2 kilolitres of sewage removed from all residential dwellings in the municipal area is free. Fixed charges do not apply to dwellings occupied by domestic households.

The Indigent Grant is applicable to the water and sanitation tariff for qualifying households. The net result is that an Indigent household can consume additional 4.5kℓ water per month and can discharge an additional 3.15kℓ wastewater per month (with sewerage disposal 70% of water consumption) without attracting any charges.

This subsidy would be ineffective without the ongoing Water Management Device installations and associated indigent household leak Repairs, which is aimed at reducing consumption, reducing monthly bills and eliminating arrears of properties occupied by Indigent households.

Table C3.2: Overview of metering, billing and Free Basic Services

Regulations Ref. #	Description	Unit	Year 2017	Year 2016	Year 2015
			FY2016/17	FY2015/16	FY2014/15
	UNITS SUPPLIED (as per water services access profile)	-			
10.2 (b) (i)	Household water connections (house and yard connections)(including informal settlements bulk connections)	Nr	615 512	609 294	602 594
10.2 (b) (iv)	Household sewerage connections	Nr	605 395	598 836	593 318
	METERING	-			
	Metered Water Connections (aligned with Billing System)				
	Residential	Nr	615 512	609 294	602 594
	Commercial / Business	Nr	13 018	12 972	13 134
	Industrial	Nr	4 464	4 462	4 466
	Government / Institutional	Nr	13 684	12 862	12 781
	Bulk		293	224	287
N	Schools		1849	1 834	1 819
	Other	Nr	6 309	6 018	5 911
	Sub-Total: Metered Water Connections	Nr	655 129	647 666	640 992
10.2 (b) (vi)	Proportion of metered connections (residential)	%	100%	100%	100%
10.2 (e) (i)	Total number of meters	Nr	655 129	647 666	640 992
	Total number of new connections (aligned with Table C.2.1)	Nr	6 672	6 700	5 375
	Total number of new meters installed	Nr	6 559	6 674	6 921
10.2 (e) (ii)	Proportion of new connections, metered	%	98.31%	100 %	100%
	Number of meters tested	Nr	-	0	0
10.2 (e) (ii)	Proportion of meters tested to total number of meters	%	-	-	-
	Number of meters replaced	Nr	48 205	51 869	38 564
	Proportion of meters replaced to total number of meters	%	7%	8%	6%
	BILLING	-			
	Customer billing (water and sewerage)		Nr	Nr	Nr
	Residential	Nr	615 512	609 294	602 594
	Commercial / Business	Nr	13 018	12 972	13 134
	Industrial	Nr	4 464	4 462	4 466
	Government / Institutional	Nr	13 684	12 862	12 781
	Bulk	Nr	293	224	287
	Schools	Nr	1849	1 834	1 819
	Other	Nr	6 309	6 018	5 911
	Sub-Total: Customers billed	Nr	655 129	647 666	640 992
	Proportion of bills to metered connections	%	100.0%	100.0%	100.0%

	Residential	%	100.0%	100.0%	100.0%
	Commercial / Business	%	100.0%	100.0%	100.0%
	Industrial	%	100.0%	100.0%	100.0%
	Government / Institutional	%	100.0%	100.0%	100.0%
10.2 (b) (v)	Bulk	%	100.0%	100.0%	100.0%
	Schools	%	100.0%	100.0%	100.0%
	Other	%	100.0%	100.0%	100.0%
	FREE BASIC SERVICES				
	Nr customers receiving:				
	Free Basic Water	Nr	615 808	609 294	602 594
	Free Basic Sanitation	Nr	605 395	598 836	593 318
	Proportion of Free Basic Services				
	Water	%	100.0%	100.0%	100%
	Sewerage	%	100.0%	100.0%	100%

C3.3 Revenue collection and cost recovery

The City of Cape Town's revenue collection and cost recovery on water services rendered by the municipality is summarized in the table below.

The FY2016/17 collection rate was 80% for water and 92.43% for sanitation

Risks to achieving Utility Services/Water and Sanitation revenue projections:

- Security and quality of supply
- Certain aspects of the economic slowdown are still evident
- The increase in the indigent register

Capital budget: The high requirement for necessary infrastructure is driven largely by capacity requirements due to growth and economic development, the refurbishment of current infrastructure as well as projects related to system efficiency which places severe pressure on the City's Capital Budget.

To achieve the required Capital Budget, it is necessary to maximise the use of Grant funding and to make optimal use of the Capital Replacement Reserve (CRR) within the financial constraints.

Operating budget: It is difficult to reach optimum levels of staff, maintain acceptable levels of infrastructure maintenance and carry the impact of the capital programme within the financial constraints during difficult economic conditions.

The pressure on the operating budget needs to be addressed via possible above-inflation tariff increases and initiatives to ensure that money due to the City is collected. There is a benefit envisaged from the current debt action and projects related to metering efficiency gains and data purification.

Table C3.3: Overview of water services revenue collection and cost recovery

Regulations Ref. #	Description	Year 2017 (Year 0)	Year 2016 (Year 1)	Year 2015 (Year 2)
		FY2016/17	FY2015/16	FY2014/15
	INCOME	R'000 000	R'000 000	R'000 000
	Billed			
	Water reticulation / provision	3 554	2 985	2 514
	Sewerage / wastewater	1 651	1 535	1 319
	Sub-Total: Billed	5 205	4 520	3 834
	Collections	0	0	0
	Water reticulation / provision	2 483	2 406	2 210
	Sewerage / wastewater	1 421	1 354	1 202
	Sub-Total: Collections	3 904	3 760	3 411
	Equitable share income			
	Water reticulation / provision	-	-	-
	Sewerage / wastewater	-	-	-
	Sub-Total: Equitable share income	173	134	163
	EXPENDITURE (O & M)	R'000 000	R'000 000	R'000 000
	Water services	-	-	-
	Sewerage / wastewater services	-	-	-
	Total: Water Services O&M	7 745	7 359	6 168
	COST RECOVERY ANALYSIS / RATIO			
10.2 (d) (ii)	Unrecovered as % of Revenue Billed			
	Water	30.14%	19.41%	12.11%
	Sewerage	13.93%	11.78%	8.94%
	Total	25.00%	16.82%	11.02%
10.2 (d) (iii)	Unrecovered as % of Cost			
	Water services	-	-	-
	Sewerage / wastewater services	-	-	-
	Total	16.80%	10.33%	6.85%

**Note: the above table does not reflect the internal income streams between Bulk Water Branch, Wastewater Branch and other streams.*

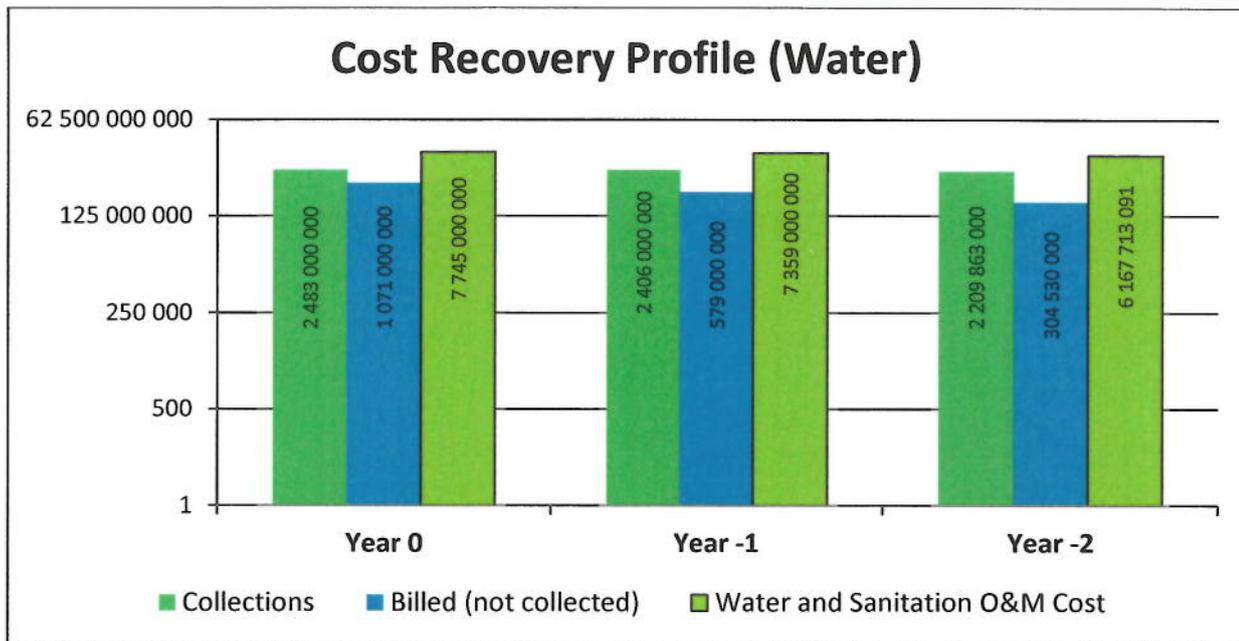


Figure C3.3.1: Revenue collection and cost recovery profile (water)

*Note O&M costs include both water and sanitation

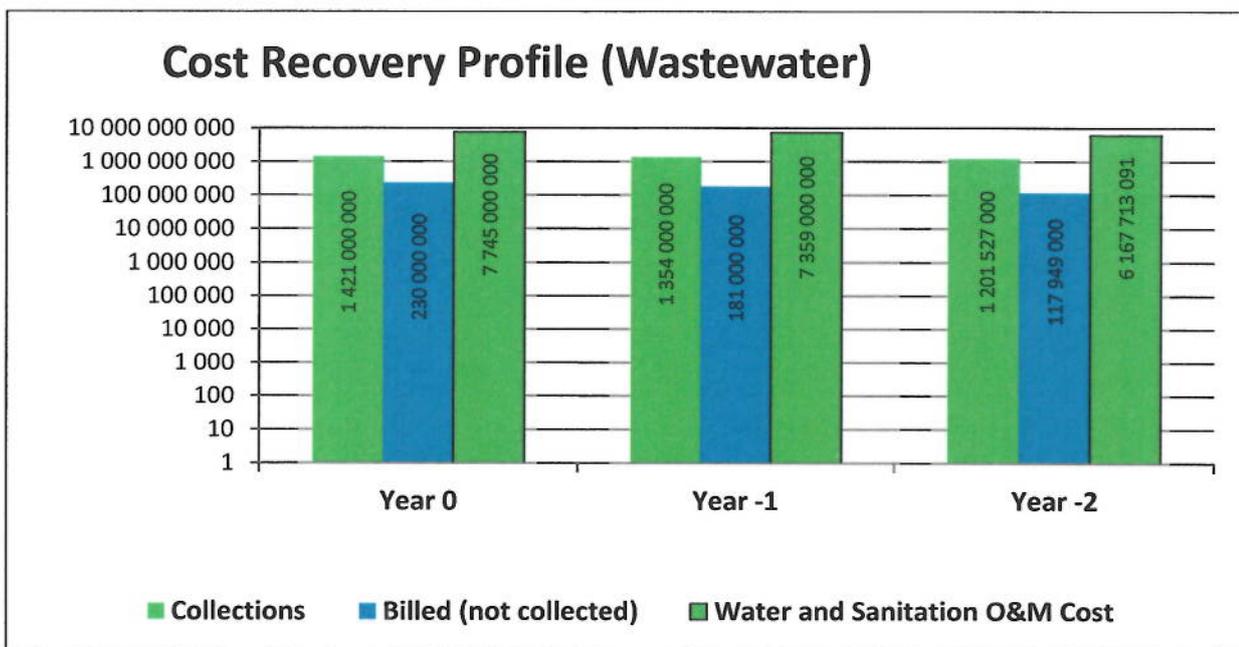


Figure C3.3.2: Revenue collection and cost recovery profile (wastewater)

*Note O&M costs include both water and sanitation

C4. Water quality

The ‘Regulations relating to Compulsory National Standards and Measures to Conserve Water’ (April 2001) determines that the water services audit to be included in the annual report on the implementation of its water services development plan, should include:

“10. (f) the water quality sampling programme contemplated in regulation 5(1), the results of the comparison set out in regulation 5(3) and any occurrence reported in compliance with regulation 5(4)”

The required information is presented in the following sections:

- Sampling programme

- Water quality compliance
- Incident management

Since 2013 there have been no further assessment with regards to Green Drop status which measures the quality of the City's wastewater treatment works (WWTW)s.

C4.1 Sampling programme

The quality of water produced at the CCT's water treatment plants is strictly monitored on a continual operational basis by the Bulk Water Branch to ensure compliance with the South African National Standard (SANS 241:2011) on drinking water quality. The Scientific Services Branch also conducts routine sampling and analysis of potable water produced at all water treatment plants, as well as inspection of treatment processes.

Table C4.1.1: Sampling programme for potable water quality

Treated Water Schemes								
Registered Sites per Scheme		Active (yes/no)			Determinants per Category	Frequency (days)		
		Year 2017	Year -2016	Year - 2015		Year 2017	Year -2016	Year - 2015
#	Name	FY2016/17	FY2015/16	FY2014/15		FY2016/17	FY2015/16	FY2014/15
1	Water Treatment Plants	yes	yes	yes	Microbiological (Health) (as per SANS 241)	7	7	7
					Chemical (Health) (as per SANS 241)	7	7	7
					Physical, Organoleptic (Non Health) (as per SANS 241)	7	7	7
					SANS 241 Operational Tests	7	7	7
2	Reservoir	yes	Yes	yes	Microbiological (Health) (as per SANS 241)	7	7	7
					Chemical (Health) (as per SANS 241)	7	7	7
					Physical, Organoleptic (Non Health) (as per SANS 241)	7	7	7
					SANS 241 Operational Tests	7	7	7
3	Distribution	yes	yes	yes	Microbiological (Health) (as per SANS 241)	14	14	14
					Chemical (Health) (as per SANS 241)	14	14	14
					Physical, Organoleptic (Non Health) (as per SANS 241)	14	14	14
					SANS 241 Operational Tests	14	14	14

*Sampling done every seven days

**Sampling done every fourteen days

Table C4.1.2: Sampling programme for wastewater effluent quality

Registered Sites		Active			Determinants per Category	Frequency (days)		
		Year 2017	Year -2016	Year - 2015		Year 2017	Year -2016	Year - 2015
#	Name	FY2016/17	FY2015/16	FY2014/15		FY2016/17	FY2015/16	FY2014/15
1	Athlone	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
2	Bellville	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
3	Borchards Quarry	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
4	Camps Bay Outfall	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
5	Cape Flats	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
6	Fisantekraal	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
7	Gordons Bay	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
8	Green Point Outfall	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
9	Groot Springfontein	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
10	Hout Bay	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
11	Klipheuwel	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
12	Kraaifontein	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
13	Llandudno	Active	Active	Active	Microbiological	7	7	7

					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
14	Oudekraal	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
15	Macassar	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
16	Melkbosstrand	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
17	Millers Point	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
18	Mitchells Plain	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
19	Parow	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
20	Philadelphia	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
21	Potsdam	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
22	Scottsdene	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
23	Simons Town	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
24	Wesfleur	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
25	Wildevoevlei	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7
26	Zandvliet	Active	Active	Active	Microbiological	7	7	7
					Chemical	7	7	7
					Operational	7	7	7
					Physical	7	7	7

*sampling done every seven days

An overview of the City of Cape Town's compliance to its water- and wastewater sampling programmes is presented in the tables which follow.

Table C4.1.3: Compliance to the sampling programme (s)

Measurable / Enabling Factor	Unit	Year 2017				Year 2016				Year -2015			
		FY2016/17				FY2015/16				FY2014/15			
		M	C	P	O	M	C	P	O	M	C	P	O
Potable Water Quality													
Supply system submissions	Nr registered	1	1	1	1	1	1	-	-	1	1	-	-
	Nr submitted*	1	1	1	1	1	1	-	-	1	1	-	-
	Annual %	100	100	100	100	100	100	-	-	100	100	-	-
Monitoring compliance	Average %	84.2	90.2	89.4	86.1	87.73	86.16	-	-	83.73	92.39	-	-
Data Credibility	Average %	>99.9	>99.9	>99.9	>99.9	99.9	99.72	-	-	99.9	99.9	-	-
BDS In-Time Submission	Annual %	>99.9	>99.9	>99.9	>99.9	99.8	99.9	-	-	91.58	97.78	-	-
Wastewater Quality													
Monitoring compliance	Average %	87.05				-				78.72			
*Operational monitoring compliance	Average %	87.05				-				-			

Legend M: Microbiological; C: Chemical; P: Physical; O: Operational

*The Operational monitoring are tests performed on site e.g. Imhoff cone tests (Settleability), Chlorine (Free and Total), Dissolved Oxygen (DO), NH₃,

Table C4.1.4: Water quality monitoring overview from WSDP Guide Framework perspective

WSDP Ref #	Measurable / Enabling Factor	Unit	Year 2017	Year - 2016	Year - 2015
			FY2016/17	FY2015/16	FY2014/15
6.3	Water Supply and Quality				
6.3.2	Process Control in place	yes/total WTW in %	100%	100%	100%
6.3.3	Monitoring Programme in place	yes/total schemes in %	100%	100%	100%
6.3.4	Sample Analysis Credibility	Average %	100%	100%	100%
9.2	Monitoring				
9.2.1	% of water abstracted monitored: Surface water	Q monitored / Q abstracted in %	100%	100%	100%
9.2.2	% of water abstracted monitored: Ground water	Q monitored / Q abstracted in %	100%	100%	100%
9.2.3	% of water abstracted monitored: External Sources (Bulk purchase)	Q monitored own / Q purchased in %	N/A	N/A	N/A
9.2.6	Water quality for formal schemes? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	frequency	1	1	1
9.2.7	Water quality for rudimentary schemes? (1: daily, 2: weekly, 3: monthly, 4: annually, 5: never)	frequency	N/A	N/A	N/A
9.2.9	Is the number sufficient in accordance to the SANS241 requirements?	yes/no	Yes	Yes	Yes
9.3	Water Quality				
	Is there a water quality plan in place?	yes/no	Yes	Yes	Yes
9.3.1	Reporting on quality of water taken from source: urban & rural	yes/total schemes in %	100%	100%	100%
9.3.5	Quality of water taken from source: urban - % monitored by WSA self?	monitored by WSA / total schemes in %	N/A	N/A	N/A
9.3.6	Quality of water taken from source: rural - % monitored by WSA self?	monitored by WSA / total schemes in %	100%	100%	100%
9.3.9	Are these results available in electronic format?	yes/no	Yes	Yes	Yes

Table C4.1.5: Wastewater quality monitoring overview from WSDP Guide Framework perspective

WSDP Ref #	Measurable / Enabling Factor	Unit	Year 2017	Year 2016	Year -2015
			FY2016/17	FY2015/16	FY2014/15
5.3.1	Monitoring and Sample Failure				
5.3.1.1	<u>Monitoring:</u> % of tests performed as required by general limits /special limits/ license requirements (Average % over previous 12 months)	Annual %	99%	99%	99%
5.3.1.2	<u>Operational:</u> % of tests performed as required by general limits /special limits/ license requirements (Average % over previous 12 months)	Annual %	-	-	-
6.4	Wastewater Supply and Quality				
6.4.2	Process Control in place	yes/total WWTW in %	yes (100%)	yes (100%)	yes (100%)
6.4.3	Monitoring Programme in place	yes/total WWTW in %	yes (100%)	yes (100%)	yes (100%)
6.4.4	Sample Analysis Credibility	Average %	100%	100%	100%
9.2	Monitoring				
9.2.10	Is the number sufficient in accordance to licences?	yes/no	yes	yes	yes
9.3	Water Quality				
	Is there a water quality plan in place?	yes/no	yes	yes	yes
9.3.2	Quality of water returned to the resource: urban	yes/total WWTW in %	100%	100%	100%
9.3.3	Quality of water returned to the resource: rural	yes/total WWTW in %	NA	NA	NA
9.3.7	Quality of water returned to resource: urban - % monitored by WSA self?	monitored by WSA / urban WWTW in %	100%	100%	100%
9.3.8	Quality of water returned to resource: rural - % monitored by WSA self?	monitored by WSA / rural WWTW in %	NA	NA	NA
9.3.9	Are these results available in electronic format?	yes/no	yes	yes	yes

C4.2 Water quality compliance

Table C4.2.1: Overview of water quality compliance

WSDP Ref #	Measurable / Enabling Factor	Unit	Year 2017				Year 2016				Year-2015			
			FY2016/17				FY2015/16				FY2014/15			
			M	C	P	O	M	C	P	O	M	C	P	O
Results per the Blue Drop System														
n/a	Analysis compliance	Total	9272	36598	28486	44472	9161	64583			9077	14284	17279	
n/a		Nr Failures	37	15	118	2249	52	297			21	15	21	
n/a		Compliance %	99.6%	99.9%	99.6%	95.0%	99.4%	99.5%			99.8%	99.9%	99.9%	
n/a	Samples frequency	Total	9271	2733	8574	9419	9160	2754			9061	1307	8621	
n/a		Nr Failures	376	14	104	1993	52	119			21	14	20	
n/a		Compliance %	99.6%	99.5%	98.8%	78.9%	99.4%	95.9%			99.8%	99.9%	99.8%	
n/a	Sites compliance	Total	2846	2203	2839	2849	2899	2146			2647	923	2645	
n/a		Nr Failures	31	12	58	1140	47	106			21	9	17	
n/a		Compliance %	98.9%	99.5%	98.0%	60.0%	98.4%	95.1%			99.2%	98.9%	99.4%	
6.3	Water Supply and Quality													
6.3.6	Blue Drop Status	certified per BDS	In June 2017, the City's most recent score was an impressive 95,86%.				The City's most recent score was an impressive 95,86% as at June 2016				No new score released. Had Blue Drop status based on 2012 score.			
9.3	Water Quality													
9.3.10	% Time (days) within SANS 241 standards per year	Average of sites compliance %	89.1%				96.75				99.17			

Legend M: Microbiological; C: Chemical; P: Physical; O: Operational

Table C4.2.2: Overview of wastewater quality compliance

WSDP Ref #	Measurable / Enabling Factor	Unit	Year 2017				Year 2016				Year-2015			
			FY2016/17				FY2015/16				FY2014/15			
			M	C	P	O	M	C	P	O	M	C	P	O
Results per the Green Drop System														
n/a	Regulatory compliance	Total	1024	4543	3367		N/A	N/A	N/A		100 %	100 %	100 %	
n/a		Nr Failures	206	780	192		N/A	N/A	N/A		39%	37%	42%	
n/a		Compliance %	80%	79%	95%		N/A	N/A	N/A		61%	63%	58%	
n/a	Operational compliance	Total	1024	4543	3367									
n/a		Nr Failures	206	780	192									
n/a		Compliance %	80%	79%	95%		N/A	N/A	N/A		tbd	tbd	tbd	
5.3.1	Monitoring and Sample Failure													
5.3.1.3 5.3.1.4 5.3.1.5	Average % of sample failure	Failure %	14%				N/A				39.3%			
6.3	Water Supply and Quality													
6.4.6	Green Drop Status	certified per GDS	No later report available				Green Drop Report 2013 89.7%				Green Drop Report 2011 86.8%			

Please note that: tbd = to be determined

C4.3 Incident management

Another aspect to water quality is the level of institutional response to water quality failure incidents – herein presented as incident management.

Table C4.3.1: Incident management and reporting overview

WSDP Ref #	Measurable / Enabling Factor	Unit	Year 2017	Year 2016	Year - 2015
			FY2016/17	FY2015/16	FY2014/15
6.3	Water Supply and Quality				
6.3.1	Incident Management Protocol in place	yes/total schemes in %	100%	100%	100%
6.3.5	Failure Response Management in place	yes/total schemes in %	100%	100%	100%
6.4	Waste Water Supply and Quality				
6.4.1	Incident Management Protocol in place	yes/total schemes in %	100%	100%	100%
6.4.5	Failure Response Management in place	yes/total schemes in %	100%	100%	100%

Table C4.3.2: Water quality incident reporting compliance (health oriented)

Measurable / Enabling Factor	Unit	Year 2017				Year 2016				Year-2015			
		FY2016/17				FY2015/16				FY2014/15			
		Acute Health - 1 Microbiological	Acute Health - 1 Chemical	Acute Health - 2 Microbiological	Chronic Health	Acute Health - 1 Microbiological	Acute Health - 1 Chemical	Acute Health - 2 Microbiological	Chronic Health	Acute Health - 1 Microbiological	Acute Health - 1 Chemical	Acute Health - 2 Microbiological	Chronic Health
Failures in terms of Analysis	Total nr	9 272	36 598			9 161	64 583			9072	3029	158	23761
	Nr of failures	37	15			52	297			19	0	0	32
	Failure %	4.79%	0.44%			6.79%	5.75 %			0%	0%	0%	0%
	Nr reported	37	15			52	297			100	100	100	100
	Reported % of failure	100%	100%			100 %	100 %			100%	100%	100%	100%
*Failures in terms of Samples	Total	9 271	2 733			9 160	2 754			-	-	-	
	Nr of failures	37	14			52	119			-	-	-	-
	Failure %	4.79%	5.58%			6.79%	48.94%						
	Nr reported	37	14			52	119			-	-	-	-
	Reported % of failure	100%	100%			100 %	100 %			-	-	-	-
**Failures in terms of Sites	Total	2 846	2 203			2 899	2 146			-	-	-	-
	Nr of failures	31	12			47	106			-	-	-	-
	Failure %	13.15%	5.79%			19.39%	58.33%			-	-	-	-
	Nr reported	31	12			47	106			-	-	-	-
	Reported % of failure	100%	100%			100 %	100 %			-	-	-	-

*Samples failures not reported in terms of number of samples. **The entire Water Distribution System is reported on as one site.

C5. Water conservation and demand management

The 'Regulations relating to compulsory national standards and measures to conserve water', requires in section 10 (2) (g), that the water services authority should report on water conservation and demand management, including at least:

- (i) the results of the water balance as set out in regulation 11;
- (ii) the total quantity of water unaccounted for
- (iii) the demand management activities undertaken; and
- (iv) the progress made in the installation of water efficient devices

Items (i) and (ii) above has been addressed as part of Section C1 of this report.

The Department is applying the resources required to implement water demand management interventions, including: (a) reduction of high pressure, minimum night flow for residential consumers, (b) education programmes, (c) plumbing leak and meter repair programmes, (d) pipe replacement, treated effluent re-use, water restrictions and stepped tariffs.

The City of Cape Town has already started implementing the water balance as per the International Water Association (IWA standard). CCT is in the process of defining various District Metered Areas (DMA's). Once the proposed DMA's have been finalised and implemented, the water balance model will be rolled down to the zone (DMA) level.

Water demand management is an essential core requirement for sustainability of water supply to the City. In circumstance where water consumption is controlled to the levels expected in the Water Conservation and Water Demand Management strategy, deferment of the next water resource scheme to approximately 2022 can be achieved.

The department utilizes the internet as an additional tool to promote the saving of water: <http://www.capetown.gov.za/search?k=keep%20saving%20water>,

Table C5: Overview of water conservation and demand management activities

WSDP Ref. #	Regulations Ref. #	Description	Urban Settlements						Rural Settlements						
			Year 2017		Year 2016		Year - 2015		Year 2017		Year 2016		Year - 2015		
			FY2016/17		FY2015/16		FY2014/15		FY2016/17		FY2015/16		FY2014/15		
7.1.1	10.2.g.iii	REDUCING UNACCOUNTED FOR WATER AND WATER INEFFICIENCIES													
		Number of customers where the following activities have been pursued:	Nr	% of total	Nr	% of total	Nr	% of total			Nr	% of total	Nr	% of total	
7.1.1.1		Night flow metering	>50-		>50-		>50-		n/a		n/a		n/a		
7.1.1.2		Day flow metering	>50		>50		>50-		n/a		n/a		n/a		
7.1.1.3		Reticulation leaks fixed on connections	29 875		30 890		33 133		n/a		n/a		n/a		
7.1.1.4		Illegal connections formalized	-		-		-		n/a		n/a		n/a		
7.1.1.5		Un-metered connections, metered	655 129		647 666		21 000		n/a		n/a		n/a		
7.1.2	10.2.g.iii	*REDUCING HIGH PRESSURES FOR RESIDENTIAL CONSUMERS													
		Number of residential consumers with water supply pressure of:	Nr	% of total	Nr	% of total	Nr	% of total			Nr	% of total	Nr	% of total	
7.1.2.1		≤ 300 kPa (30m)	577 139.5	15.45	80 700	11%	206	0.03 %	n/a		n/a	0%	n/a	0%	
7.1.2.2		>300 kPa(30m) ≤ 600kPa (60m)	208 1573.4	55.72	523 097	72%	563 113	78.6 3%	n/a		n/a	0%	n/a	0%	
7.1.2.3		>600 kPa (60m) ≤ 900 kPa(90m)	996 847.5	26.68	117 200	16%	151 234	21.1 2%	n/a		n/a	0%	n/a	0%	
7.1.2.4	10.2.b.iii	> 900 kPa(90m)	80 440.5	2.15	6200	0.9%	1 627	0.23 %	n/a		n/a	0%	n/a	0%	
7.1.3	10.2.g.iii	LEAK AND METER REPAIR PROGRAMMES													
		Number of consumer units targeted by:	Nr	% of total	Nr	% of total	Nr	% of total			Nr	% of total	Nr	% of total	
7.1.3.1		Leak repair assistance programme (WMD)	26 683		24 997	-	32 111		n/a		-		-		
7.1.3.2	10.2.g.iv	Retro-fitting of water inefficient toilets WDM	250		250 (It has been delayed due to SCM processes)	-	250		n/a		-	0%	-	0%	
7.1.3.3		Meter repair programme USPC	12 041		14058 (increase for 2015/16 as a result of more services orders)		6 453				-		-		

		issued													
7.1.4	10.2.g.iii	CONSUMER / END-USE DEMAND MANAGEMENT: PUBLIC INFO AND EDUCATION PROGRAMMES													
		Nr	% of total	Nr	% of total	Nr	% of total			Nr	% of total	Nr	% of total		
7.1.4.1	No. schools targeted by education programmes	146		184		420		n/a		-					
7.1.4.2	No consumers (people) targeted by public information programmes	-		-		-		-		-					

The following table shows projects in more detail and over a longer implementation period for the programme as a whole.

Table C5.1: Summary of Interventions implemented and associated impact (million m³/annum)

Intervention	2016/17	2015/16	2014/15	2013/14	2012/13	Cumulative
	FY2017	FY2016	FY2015	FY2014	FY2013	
Pressure Management Areas	8.45	8.24	6.73	5.79	3.55	32.76
Plumstead/ Retreat	0.96	0.96	0.96	0.96	0.96	4.8
Marina Da Gama	0.33	0.33	0.33	0.33	0.33	1.65
Grassy Park	1.07	1.07	1.07	1.07	1.07	5.35
Bishop Lavis	0.55	0.55	0.55	0.55	0.55	2.75
Thornton	0.53	0.53	0.53	0.53	0.53	2.65
Kalkfontein	0.11	0.11	0.11	0.11	0.11	0.55
Melkbos	0.88	0.88	0.88	0.88		3.52
Brakloof	0.31	0.31	0.31	0.31		1.24
Dennehoek	0.15	0.15	0.15	0.15		0.6
Mountainside	0.65	0.65	0.65	0.65		2.6
Lynns View	0.18	0.18	0.18	0.18		0.72
Pelican Park	0.07	0.07	0.07	0.07		0.28
Ottery	0.11	0.11	0.11			0.33
Bothasig	0.4	0.40	0.40			1.2
Jagtershof	0.02	0.02	0.02			0.06
Kenridge	0	0.00	0.00			0
Harrington	0.03	0.03	0.03			0.09
Princess	0.04	0.04	0.04			0.12
New Horizons	0.06	0.06	0.06			0.18
Park Rd	0.05	0.05	0.05			0.15
Altydgedacht	0.01	0.01	0.01			0.03
Vredekloof	0.01	0.01	0.01			0.03
Kenridge	0.01	0.01	0.01			0.03
Lochner St/Owen Rd	0.06	0.06	0.06			0.18
Greenfield/Silverhurst	0.06	0.06	0.06			0.18
Melkbos	0.04	0.04	0.04			0.12
Helderzicht/De Beers Av	0.02	0.02	0.02			0.06
Firgrove	0.02	0.02	0.02			0.06
Sunningdale	0.92	0.92				1.84
Imhoff's Gift	0.03	0.03				0.06
Wynberg 3 Zone B	0.23	0.01				0.24
Vrygrond	0.23	0.23				0.46
Masiphumelele	0.14	0.14				0.28
Therina	0.04	0.04				0.08
Helderzicht	0.13	0.13				0.26
Silverboom		0.01				0.01
Potable Water Offset (conservative estimate)	6	5.81	5.44	5.52	5.68	28.45
Estimated Savings based on reduced burst rate	0	0	0.21	0.03	0.25	0.49
Citywide leak repair on leadings, meters, sluices, valves	2.84	2.84	3.89	4.59	3.58	17.74
No. Meters Replaced/ re-fixed/relocated	3 602	7 131	6 453	5 656	5 450	28,292
No. Water Management Devices Installed	26 683	24 997	31 11	17 989	7 468	80,248
No. Repairs on connections	29 875	30 890	33 133	36 968	28 933	159,799

Table C5.2: Further Capital Investment allocated to demand management activities

Project Description	FY2018 (R'000)	FY2019 (R'000)	FY2020 (R'000)	FY2021 (R'000)	FY2022 (R'000)
Treated Effluent	R 20 000	R 25 000	R 30 000	R 35 800	R 40 000
Pressure Management	R 20 000	R 23 430	R 30 000	R 30 000	R 25 000
Zone Metering & Valves	R 4760	R 0	R 0	R 0	R 0
Water Meters New Connections	R 20 500	R 24 000	R 23 000	R 23 000	R18 000
Meter Replacement Programme	R235 000	R 240 000	R252 000	R 270 000	R 270 000
Replace & Upgrade Water Network (City Wide)	R 11 260	R 22 639	R 50 000	R 130 000	R 114 000
	R 311 520	R 335 069	R 385 000	R 488 800	R 467 000

Section D: Approval and Publication Record

- D1. This Annual Water Services Development Plan Performance- and Water Services Audit Report for the Financial Year ending June 2017 is hereby approved for submission to the Minister of the Department of Water and Sanitation, the Minister for Department of Cooperative Governance, the Province and to SALGA, as required by the Water Services Act, 1997.
- D2. The municipality endeavours to summarise this report on the Department's website at <http://www.capetown.gov.za/water>,
- D3. This report will be available for inspection at the offices of the municipality as of 1 February 2018 and is available as a downloadable file on the Department's website. A printed copy is obtainable against payment of a nominal fee of R 452.77 (incl. VAT), collectable from the Water and Sanitation offices.

RECOMMENDED BY:

 24.11.2017

Manager: Water Demand Management & Strategy


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ZOLILE BASHOLO

Date 27/11/2017

APPROVED BY:

Director: Water and Sanitation


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PETER FLOWER

Date 2017-11-30

RECOMMENDED BY:

Executive Director: Utility Services


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GISELA KAISER

Date 30 November 2017

APPROVED BY:

City Manager: City of Cape Town


.....
ACHMAT EBRAHIM

Date 07.12.2017