DATE: 18 MAY 2020

REPORT TO: WATER AND WASTE PORTFOLIO COMMITTEE

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1. ITEM NUMBER: WW 09/06/20

2. SUBJECT

WATER AND SANITATION PERFORMANCE MONITORING REPORT: APRIL 2020

WATER EN SANITASIE PRESTASIEMONITERINGSVERSLAG: APRIL 2020

EZAMANZI NOCOCEKO INGXELO ENGOKUBEK'ILISO KWINDLELA YOKUSEBENZA: EPRELI 2020

LSU REF NO: G0247

3. DELEGATED AUTHORITY

In terms of delegation

This report is FOR NOTING BY

☑ **Committee name** : Water and Waste Portfolio Committee

☐ The Executive Mayor together with the Mayoral Committee (MAYCO)

☐ Council

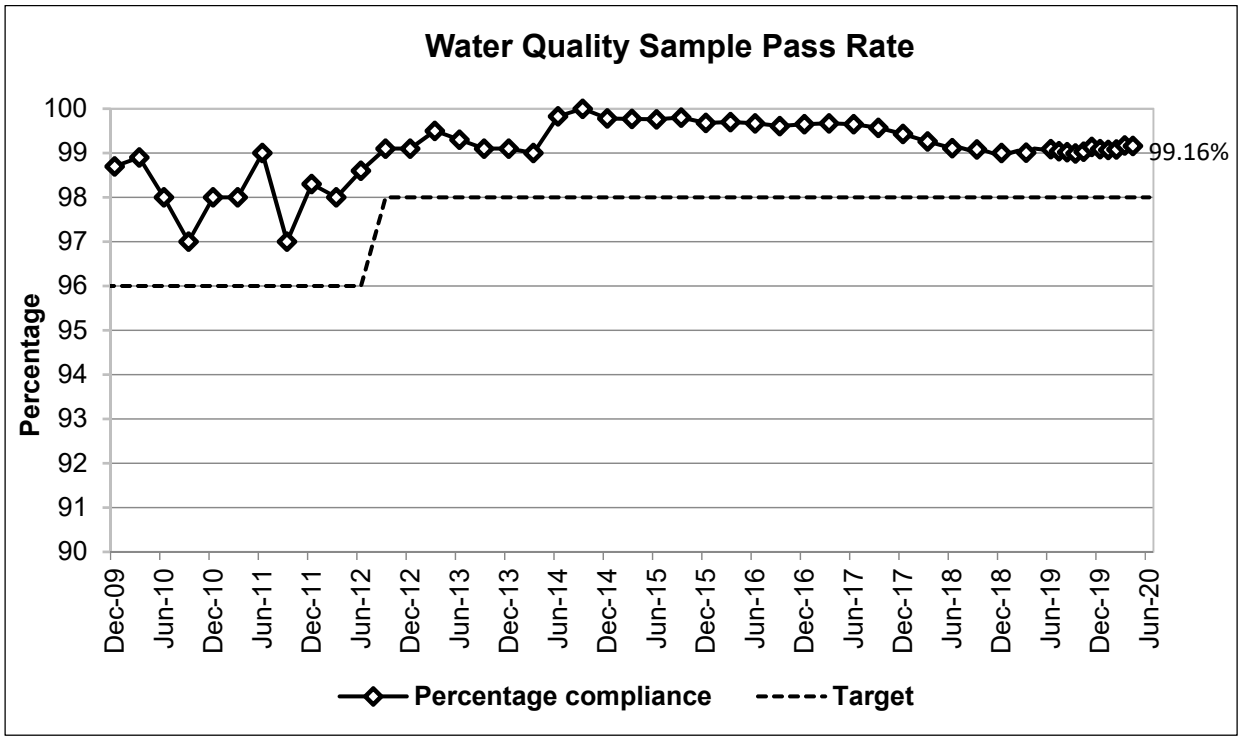
4. DISCUSSION

The City of Cape Town's five-year Integrated Development Plan (IDP) represents the overarching strategic framework through which the City aims to realise its vision for Cape Town. This is done by building on the five pillars of a caring city, an opportunity city, an inclusive city, a safe city, and a well-run city.

Water and Sanitation objectives aligning with these pillars are described in the IDP document and, in addition, are defined as indicators and targets in the Departmental SDBIP. The Department's performance and progress can be measured against these targets. The following sections provide analysis of key indicators.

4.1 The Opportunity City

4.1.1 Percentage compliance with drinking water quality standards

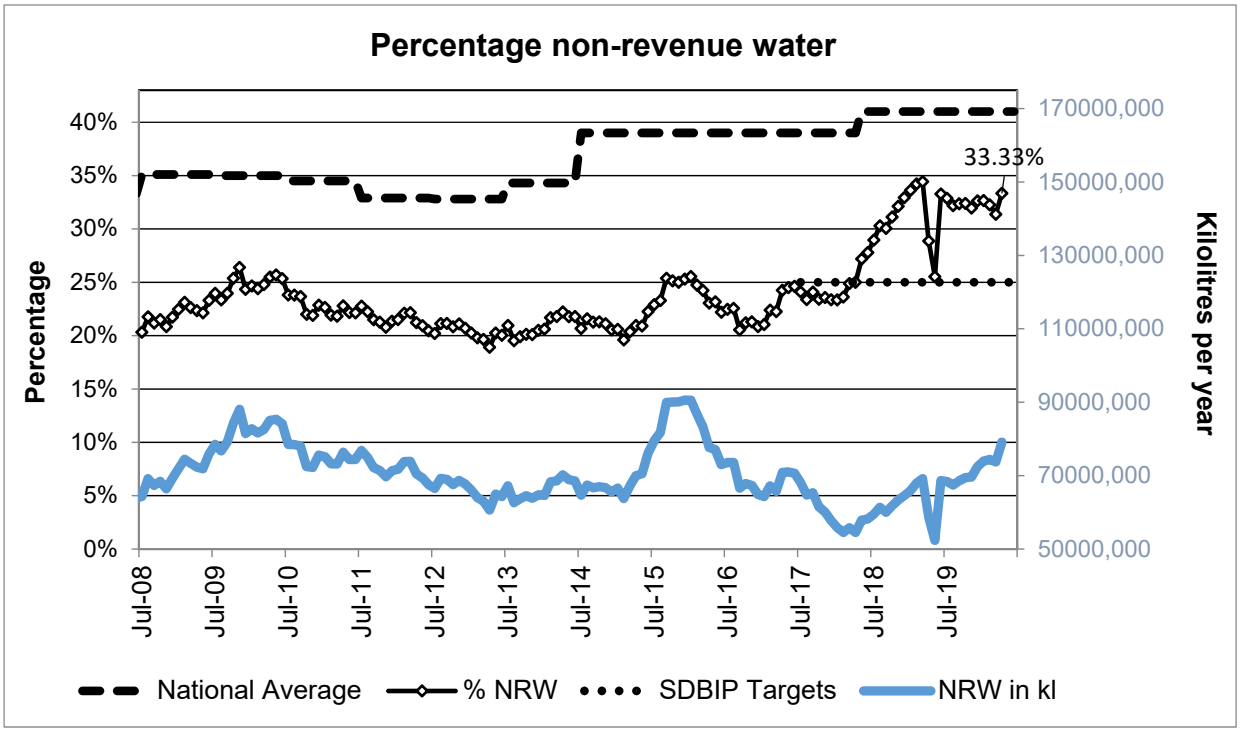


This indicator measures the potable water sample pass rate according to the South African National Standard (SANS) 241. The water quality graph above indicates the percentage achieved against this standard for Cape Town's drinking water 2009/10 – 2018/19. Compliance is measured against prescribed chemical and microbiological components. Water compliance has constantly exceeded the City's own SDBIP targets, which was 96% in 2009 to the very high 98% since July 2012. In line herewith the April 2020 compliance was 99.16%, thereby achieving the monthly target of 98%.

The slow decline in the water quality preceding June 2018 is a result of the increased number of samples failing turbidity (≤ 1 NTU) and free chlorine (≤ 0.1 mg/l). Pressure management initiatives used to reduce water consumption may have contributed to an increase in turbidity. (As the pressure is being altered, sediment in the pipeline is disturbed and comes in suspension resulting in an increase in turbidity.) In terms of the free chlorine, the increased residence time of water within the distribution network due to the low consumption rate can have an associated depletion effect.

However, it must be stressed that although both these determinants fail on their operational risk levels for some samples when tested against very stringent standards in the laboratory using extremely sensitive analysis equipment, these small differentiations are not detectable by humans. These operational risks pose no direct risk to the health of people or to the acceptability of the water. Also, the decline is measured in hundredths of a percent which is for all practical purposes negligible.

4.1.2 Percentage non-revenue water



The percentage non-revenue water (%NRW) is the volume of drinking water that is treated, but is either not billed for or lost, expressed as a percentage of total drinking water treated. Non-revenue water also includes water provided for free to informal households via communal taps. It is calculated on a 12-months rolling basis in order to smooth out short-term fluctuations. The long-term aim is to reduce the percentage of treated potable water not billed.

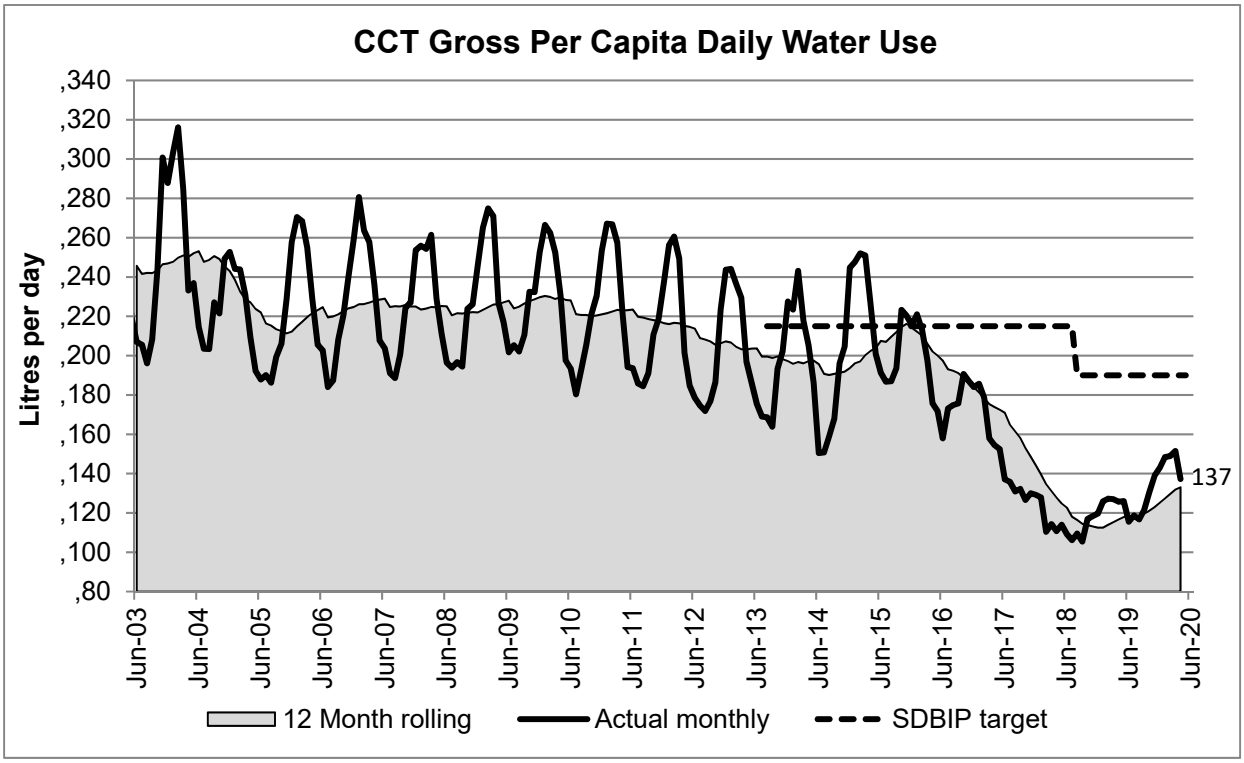
%NRW has generally kept within the 20 to 25% band over the past ten years. However, it has increased to over 30% following the drought. This is due to the total water treated (the denominator) which declined significantly due to the successful implementation of water saving initiatives such as water restrictions, pressure management, retrofitting by installing water efficient fittings, as well as water conservation programmes. The dip in April and May 2019 was attributed to the implementation of new indigent tariffs by Corporate Revenue, which resulted in discrepancies on indigent consumption volumes. By April 2020 the %NRW was 33.33%, thus above (i.e. missing) the monthly target of 25%.

The Department has a number of programmes aimed at managing and reducing water loss which are expected to reduce NRW figures over the long term. The development of a zonal water balance is progressing well, with the establishment of a database and a methodology for monthly improvement, aligning the analysis with visual inspections, billing (SWIFT) analysis, leakage indices, leak detection- and pipe replacement programmes. It must be realised that finding the reasons for high NRW results in each of several hundred zones and District Metered Areas (DMA's) requires a methodical process but is expected to drive NRW down over time.

Cape Town's participation in the national NRW training programme for municipalities started with a benchmarking trip of a senior official to Japan in April 2018. The aim of the programme is to lower the national NRW value, thereby saving the precious resource and reducing costs nationwide, recognising that this metric is arguably the single-most important efficiency measure of a water service. This is a presidential project that was approved in 2011 and jointly sponsored by JICA, SALGA and DWS.

Phase 2 has now commenced, with Cape Town generally regarded as a leader compared to other municipalities in South Africa, at the hand of quarterly NRW reporting to DWS. Cape Town's %NRW remains lower than the national average of around 41. Several of its officials are knowledgeable in key aspects thereof are participating in finalising the training modules, thereafter to help facilitate the mix of practical and theoretical training to nearby municipalities needing it most. The intention is also to embed the principles in our own practice, thereby reducing NRW. The current planned schedule extends for most of 2020.

4.1.3 Gross per capita water consumption (in litres per day) *



*Note this figure cannot be directly compared to household water use. The figures reported here is the gross per capita which includes all water supplied to the city network, including water used for commerce, industry, as well as water losses. Using gross per capita is in line with calculations by National Treasury and the national Department of Water and Sanitation (DWS).

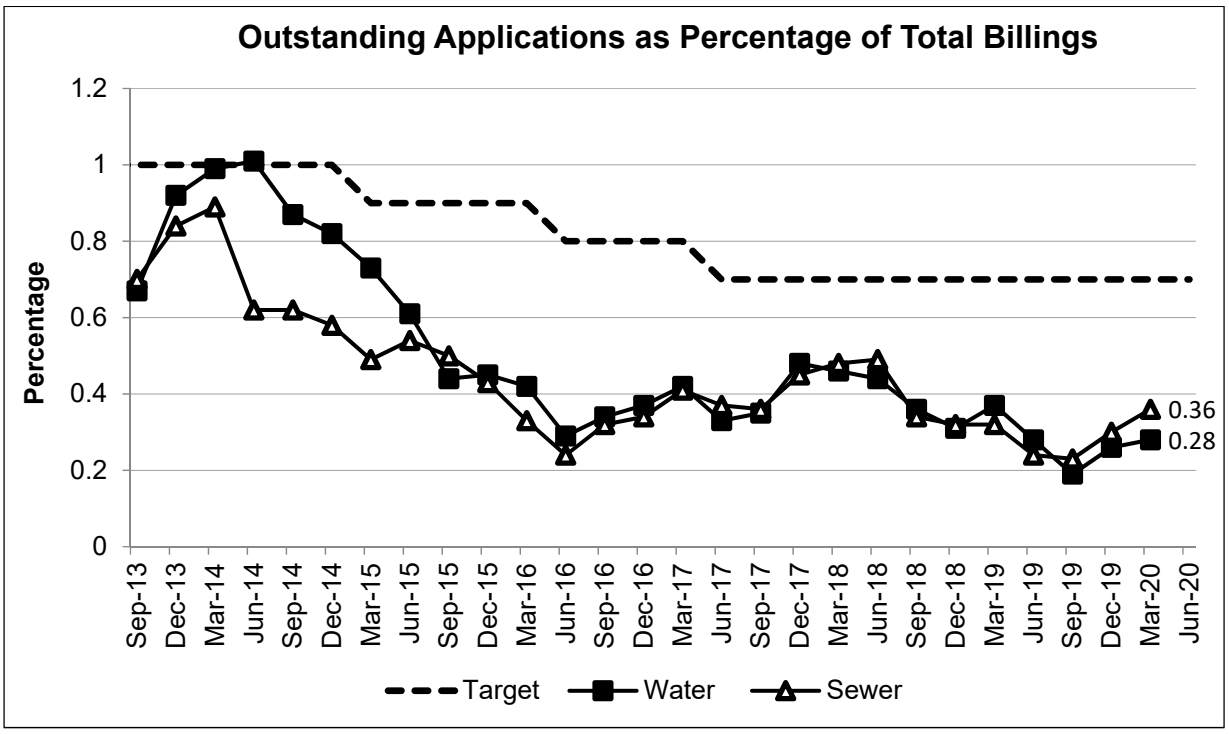
Resource efficiency is one of the 11 priorities of the new IDP. Even more so as part of the City's aim to preserve limited water reserves following the severe drought. In monitoring the efficient use of water, the Department has introduced this new indicator.

For April 2020 the per capita water consumption (in litres per day) was 137 litres, with the 12 months rolling 133.08 litres per person per day. This is much lower than the targeted 190, thus achieving the monthly per capita water consumption target. The graph shows a major decrease in per capita water consumption following the successful implementation of water restrictions and water demand management during the critical phase of the drought. This is followed by an increase in 2018/19.

In the National Water and Sanitation Master Plan (DWS, March 2018 final draft) the national average is estimated at 237 litres per person per day (l/c/d), with Metros alone at 267 l/c/d. This RSA master plan sets the national target at 173 l/c/d by 2025, in line with the current world average. Although the City is already complying, we can lead the way and set the national standard by bringing per capita water consumption down to permanent low levels appropriate to our water scarce country.

4.2 The Caring City

4.2.1 Number of outstanding valid applications for water and sewer services expressed as a percentage of total number of billings for the service



The above indicator reflects the number of outstanding valid applications (where down payments have been received) for services (where valid applications translate into an active account) expressed as a percentage of total number of active billings for the service. The aim is to be below the target.

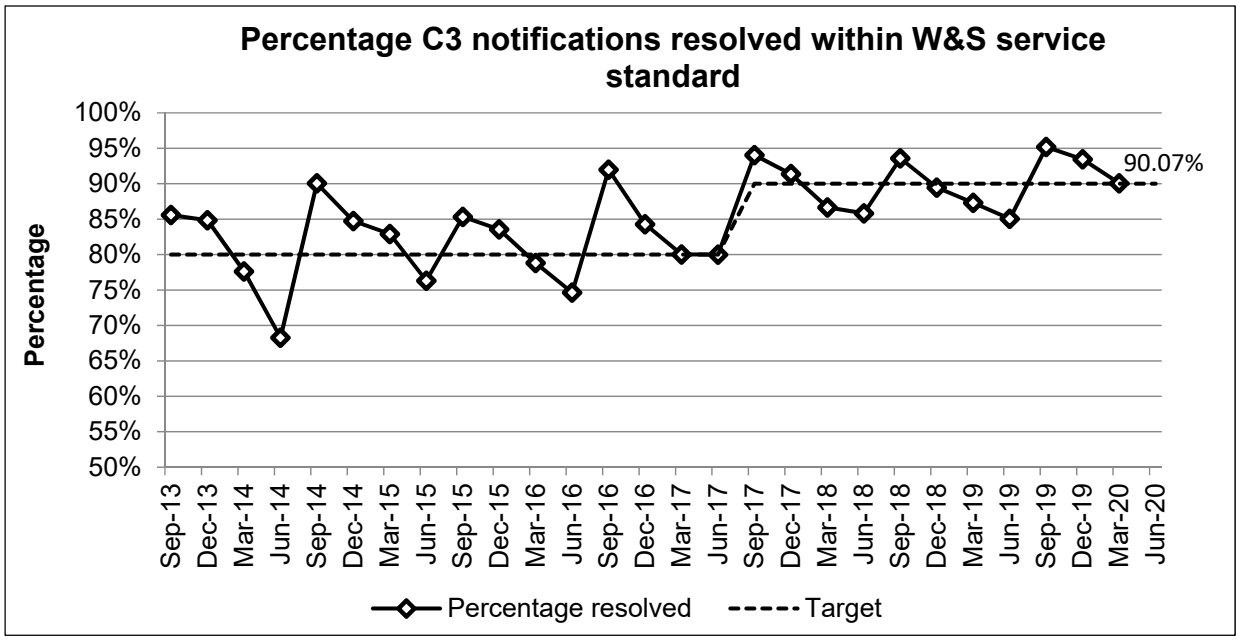
The Department processes new applications in line with its set target. The target is more stringent since June 2017 and decreased to 0.7%.

The high percentage values for the water indicator during last half of 2013/14 financial year was caused by an increase in the number of new applications for developments of which some sites were not ready for installation.

This indicator is reported on a quarterly basis. Against the targets of 0.7% for March 2020, the water and sewer figures were 0.28% and 0.36% respectively. The 2019/20 third quarter SDBIP targets have therefore been achieved.

This indicator is updated quarterly. The next update is due at the end of the fourth quarter (June 2020).

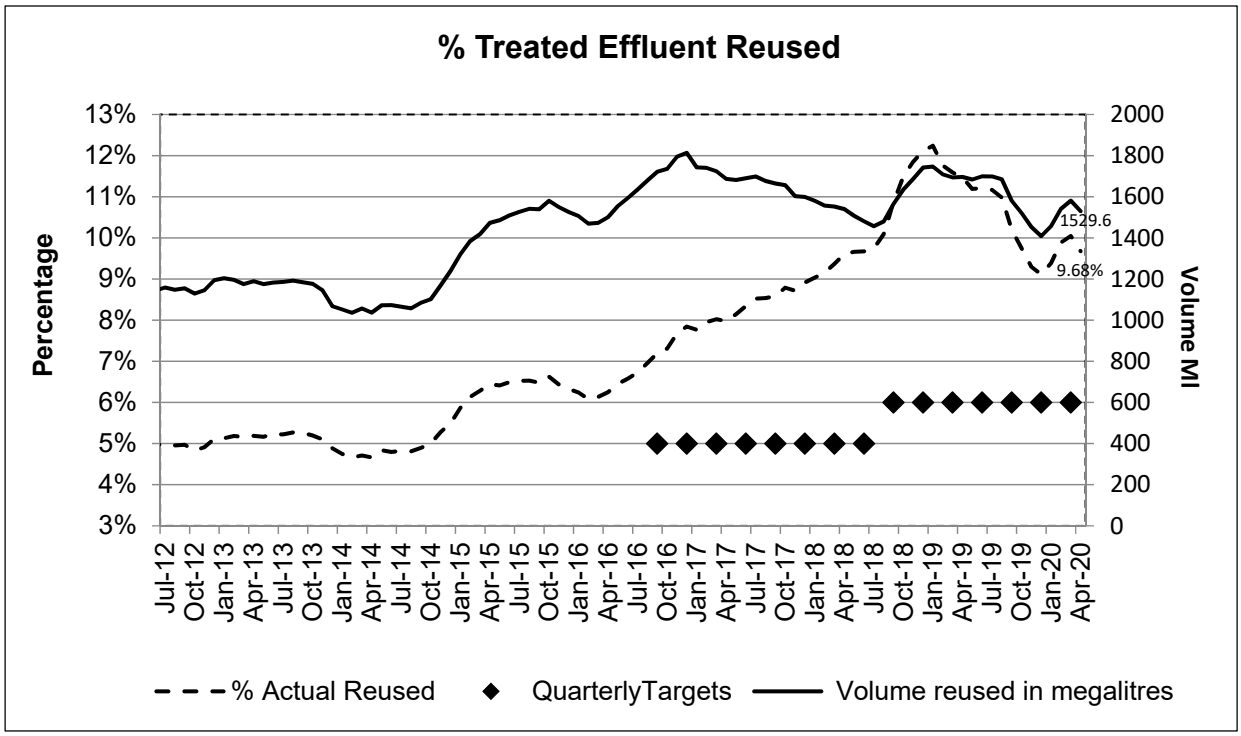
4.2.2 Percentage adherence to City-wide service requests



The Department's service standard is based on a City-wide target. In the past the target was that 80% of notifications had to be closed within 29 days (Water and Sanitation specific). Since 2017/18 the City-wide target has been raised to 90% - a more demanding target in terms of resource availability. In addition, this quarterly indicator measurement is biased towards actions on more recent notifications without crediting progress on more time-consuming older requests that are typically dependent on external factors. The Departments performance for March 2020 was 90.07%, thus achieving the 2019/20 SDBIP third quarter target of 90%.

This indicator is updated quarterly. The next update is due at the end of the fourth quarter (June 2020).

4.2.3 Percentage of potable water reused as treated effluent



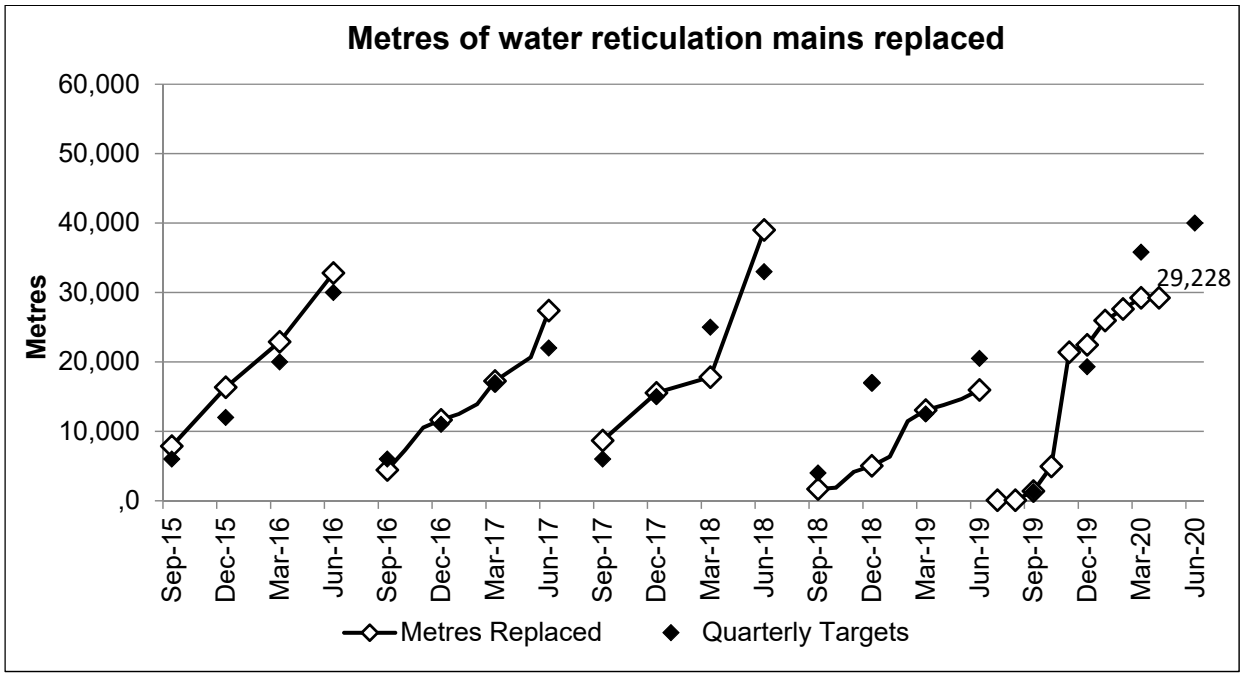
One of the initiatives described in the IDP to curtail water demand on drinking water, is the reuse of treated effluent. After initial supply to households, businesses etc., used water (i.e. the wastewater or sewage) is treated at wastewater treatment works. After treatment, most of it is safely disposed of, while a growing portion is reticulated via a separate pipeline network to be reused for irrigation on sports fields, agriculture and in industries such as construction (i.e. not as drinking water).

This indicator measures treated wastewater reused as a percentage of water supplied to CCT reticulation, expressed as a 12 months rolling average. By April 2020, 9.68% was achieved, well above the monthly target of 6%.

For the 12 months up to April 2020, 18 355.42 kl of treated effluent has been used. This is close to an average of 50 Ml of water per day for the year – contributing to bringing overall potable water demand down in line with restriction targets.

During 2017/18 a total of 32 draw-off points were constructed city-wide for various users to collect treated effluent for non-potable applications. These include various contractors, car washers, wheelie bin cleaners and internal City departments to flush stormwater and sewer pipes. The department is also preparing to promote the use of treated effluent to potential uses such as the construction industry, commerce industry and other relevant businesses.

4.2.4 Metres of water reticulation mains replaced this year



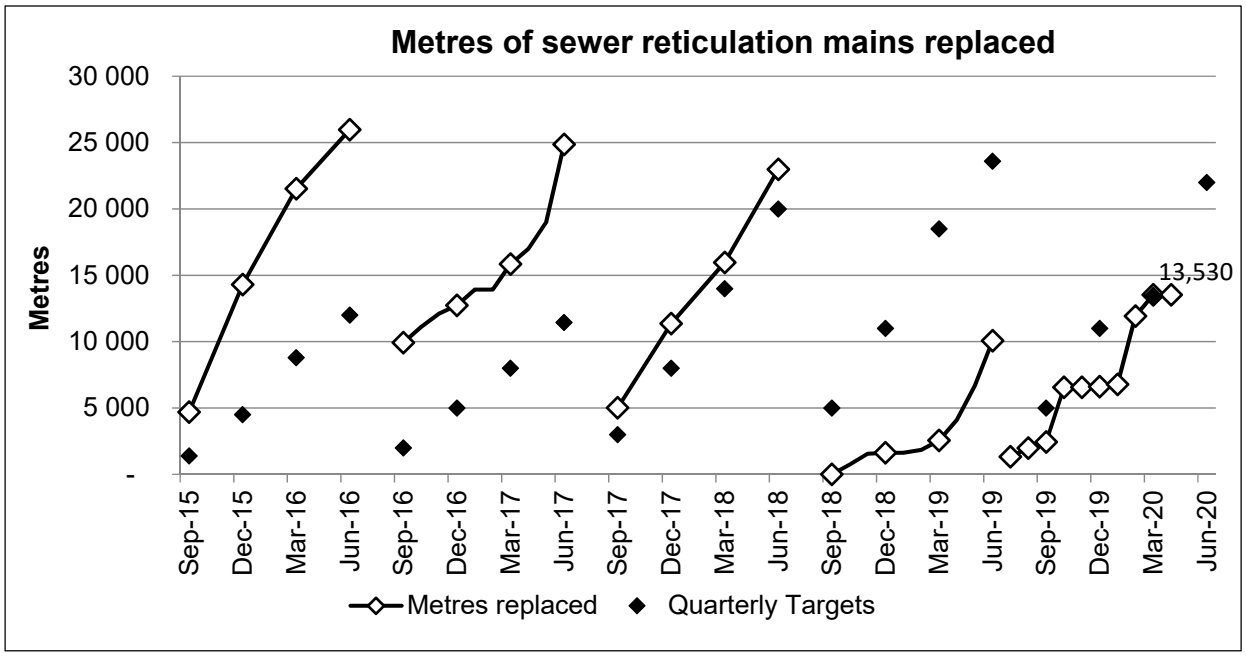
This indicator tracks the progress of the annual accumulative meters of water mains replaced as part of the Department's IDP objective to maintain the City's water infrastructure.

Initially the 2019/20 financial year commenced at a slower pace as delays relating to contractor Health and Safety compliance were experienced. Those challenges were resolved and contractor performance was closely monitored to ensure milestones were achieved. However, during the January 2020 budget adjustment period the replacement water network budget was cut by R10 million.

Due to the 2019/20 budget being depleted, we were unable to implement four of the projects included in the priority list for the water network replacement programme. These priority projects were anticipated to yield a targeted 10 000 m water mains replaced. This subsequently resulted in the department missing the 2019/20 third quarter target of 35 800 m as at the end of March 2020, thereby only replacing 29 228 m of water mains.

During the month of April 2020, there was no activity as all projects were suspended due to the nationwide level 5 lockdown which was imposed on 27 March 2020 and ended on 30 April 2020. During this period only essential services were permitted to function and as such the departments capital projects was not included in this category. Consequently, for April 2020 no meterage of pipe was recorded as a result of all projects being stopped. The outstanding four priority projects is expected to commence at the beginning of the 2020/21 financial year.

4.2.5 Metres of sewer reticulation mains replaced this year



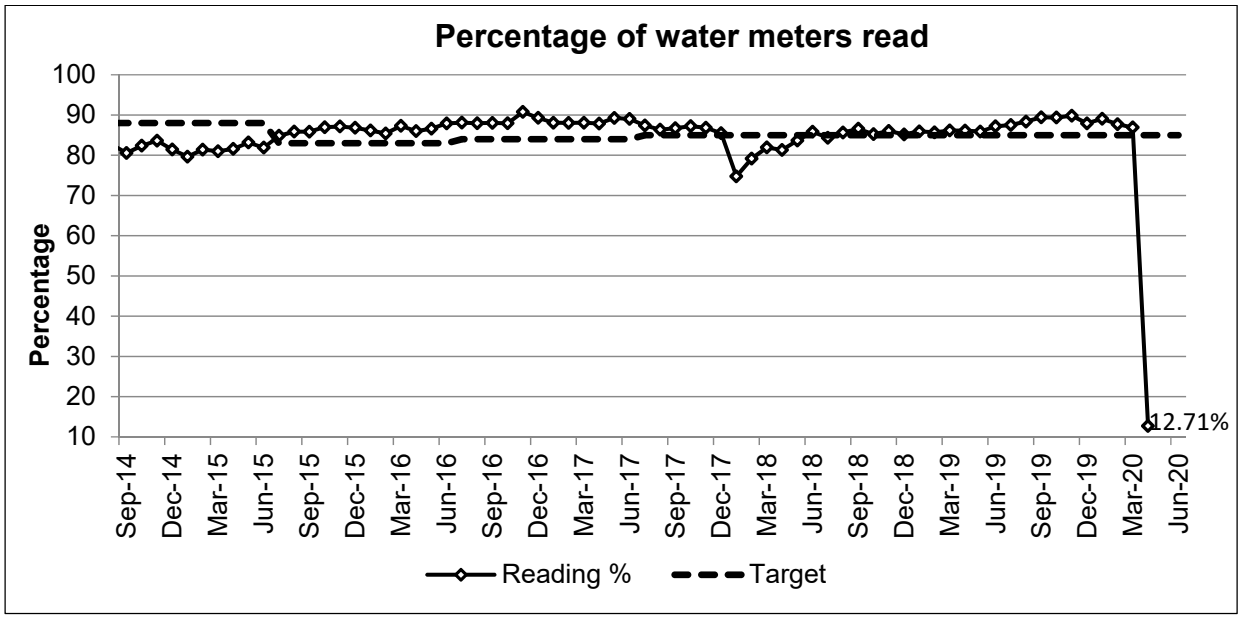
As part of the various water and sanitation infrastructure maintenance projects, sewer mains are replaced on an ongoing basis.

The 2019/20 financial year commenced at a slower pace as delays were experienced during the identification and submission of the project lists phase. In addition to this, the construction industry break which took effect from early December to mid-January 2020, also had a negative impact on the progress which contributed to missing the first and second quarterly targets. The sewer mains replaced programme also experienced a budget cut, subsequently resulting in a downward target adjustment of 19 000 m to 13 500 m for the third quarter and 28 000 m to 22 000 m for the fourth quarter respectively. At the end of March 2020, 13 530 m sewer mains were replaced, thereby achieving the 2019/20 SDBIP third quarter target.

As with water mains replaced, there was zero meterage of pipe for sewer mains recorded during April 2020 due to the nationwide level 5 lockdown. However, capital projects are able to resume from 01 May 2020, under level 4 lockdown restrictions once health and safety requirements have been met.

The department is committed to recover from this delay, however there is a high risk that this time lost may have negatively affected both budget and annual SDBIP targets. As per excepted risks from the General Conditions of Contract, the City will incur costs on claims from the contractors relating to extension of time with costs.

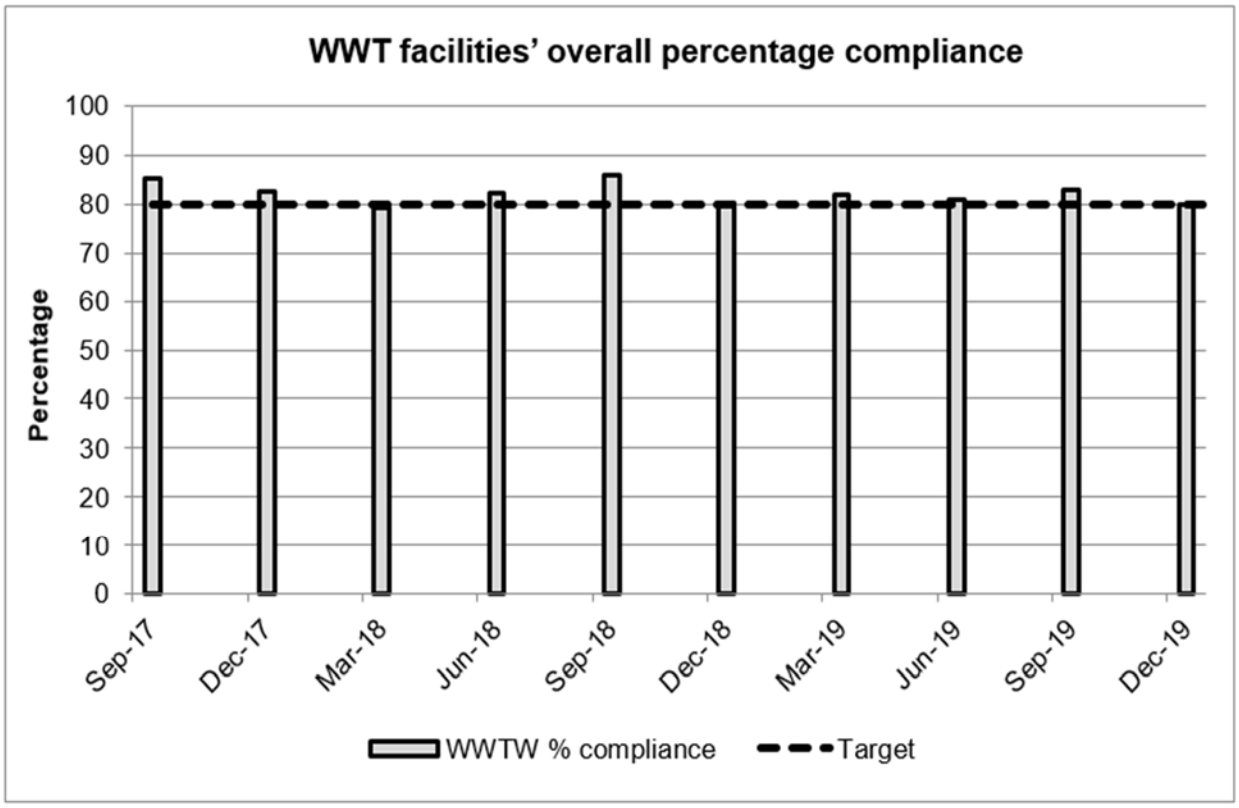
4.2.6 Percentage of water meters read on a monthly basis



Recent targets are in line with the Department's approach to encourage progressive improvements each year. The implementation of a new handheld system has had a positive effect on the meter reading percentage and is expected to continue to do so. Despite the recent advances, it should be noted that a number of challenges still exist and are being systematically addressed. These include access problems into unsafe areas as well inaccessible meters.

Since January 2018 there were temporary technical challenges experienced in the uploading of the meter reading data onto the new electronic interface. These were systematically resolved and very good progress has been made since then. The water meter reading percentage for April 2020 was 12.71%, thus missing the monthly target of 85%. The latest percentage is low due to the implementation of the National Lockdown. According to the level 5 Lockdown restrictions, the reading of water meters was deemed a non-essential service. Thus meter readers were prohibited from obtaining monthly water meter readings from customer properties.

4.2.7 Wastewater treatment facilities' overall percentage compliance



This quarterly indicator measures the wastewater treatment facilities' overall percentage compliance with the national Department of Water and Sanitation's stringent water quality requirements in terms of Regulations 991. It is calculated on a three-month average.

The City of Cape Town operates 17 wastewater treatment works, 6 smaller facilities and 3 marine outfalls. Wastewater undergoes a closely monitored treatment process before being safely discharged into e.g. rivers or the sea. The quality of treated wastewater is monitored on a weekly basis to ensure compliance with licensing conditions and national standards. The City is continually investing in its wastewater treatment works to improve the quality of our treated effluent and keep pace with our rapidly growing city. In line herewith various plant upgrades and improvements are in progress (e.g. at Borchard's Quarry and Mitchells Plain).

By December 2019 the percentage compliance was 80%, thereby achieving the 2019/20 second quarter target of 80%.

March 2020 performance not available as Scientific Services are unable to provide conclusive effluent results.

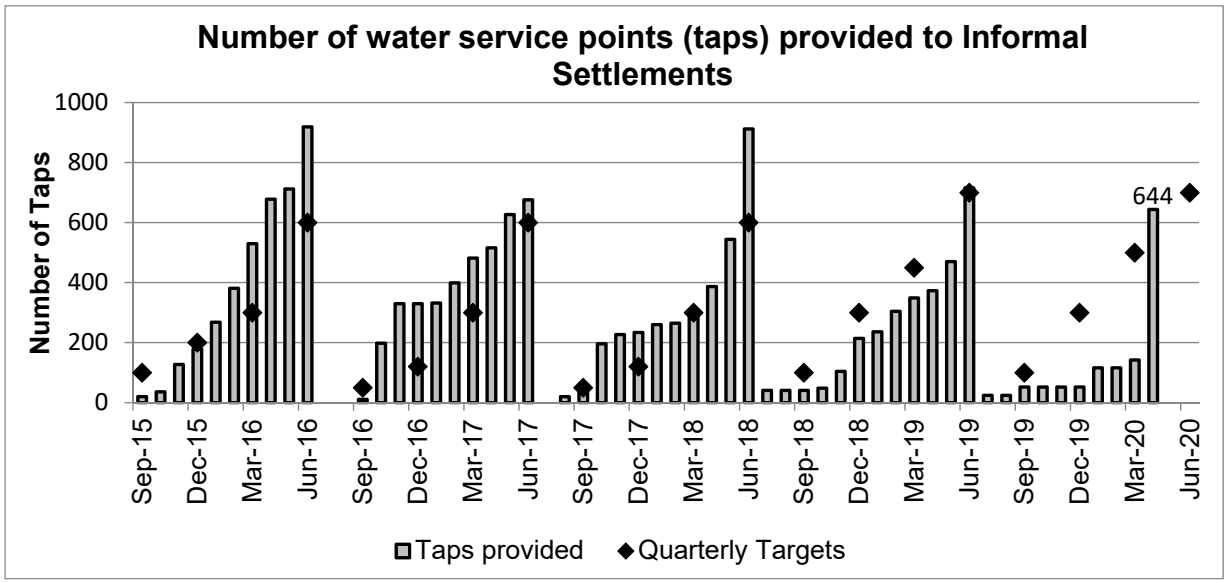
4.2.8 Number of water service points (taps) provided to informal settlements

The graph below depicts the number of water service points (taps) provided to informal settlements performance to date.

The provision of taps has been progressing slowly and at the end of December 2019 only 52 taps were installed, thus missing the 2019/20 first and second quarter targets. The underperformance was related to the challenges experienced with the award of tender 296Q/2016/17 which subsequently delayed the planned start dates of installation projects. Outstanding feedback from PRASA regarding permission to install standpipes has also negatively affected the planned installations and the ability to achieve the second quarter target.

At the end of March 2020, only 142 taps were installed thereby missing the 2019/20 SDBIP third quarter target of 450 tap installations. The implementation of tap provisions was negatively affected by the National Lockdown as service providers indicated that the supply of materials has become a major concern from vendors that have closed.

Corrective measures are currently underway as implementation of various planned projects has commenced. As a result of the Covid-19 outbreak and subsequent National Lockdown, new technologies in the form of water tanks and wash stations are currently being implemented to provide water to informal settlements that thus far have not had a water supply. The provision of taps has been progressing well for this month and at the end of April 2020, 644 taps were provided. With these additional interventions, ISBS anticipates to achieve the annual target for tap installations.

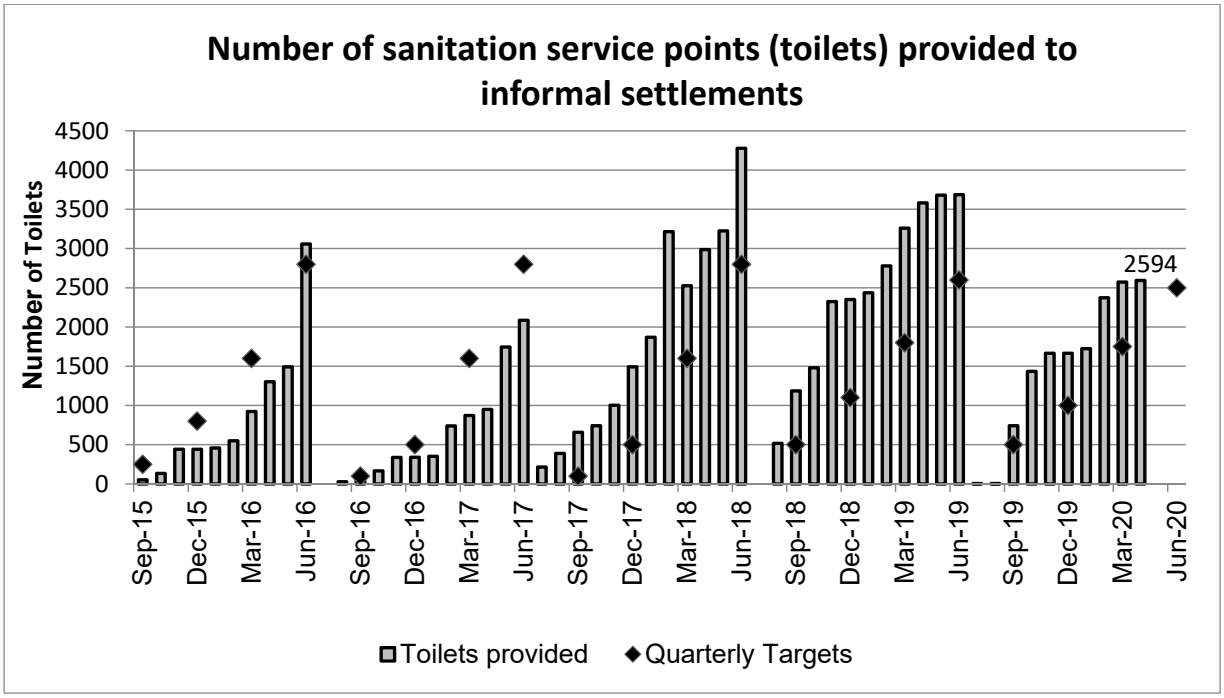


Note that certain taps may have been vandalised or removed after provision.

4.2.9 Number of sanitation service points (toilets) provided to informal settlements

The graph below depicts the number of sanitation service points (toilets) provided to informal settlements performance to date.

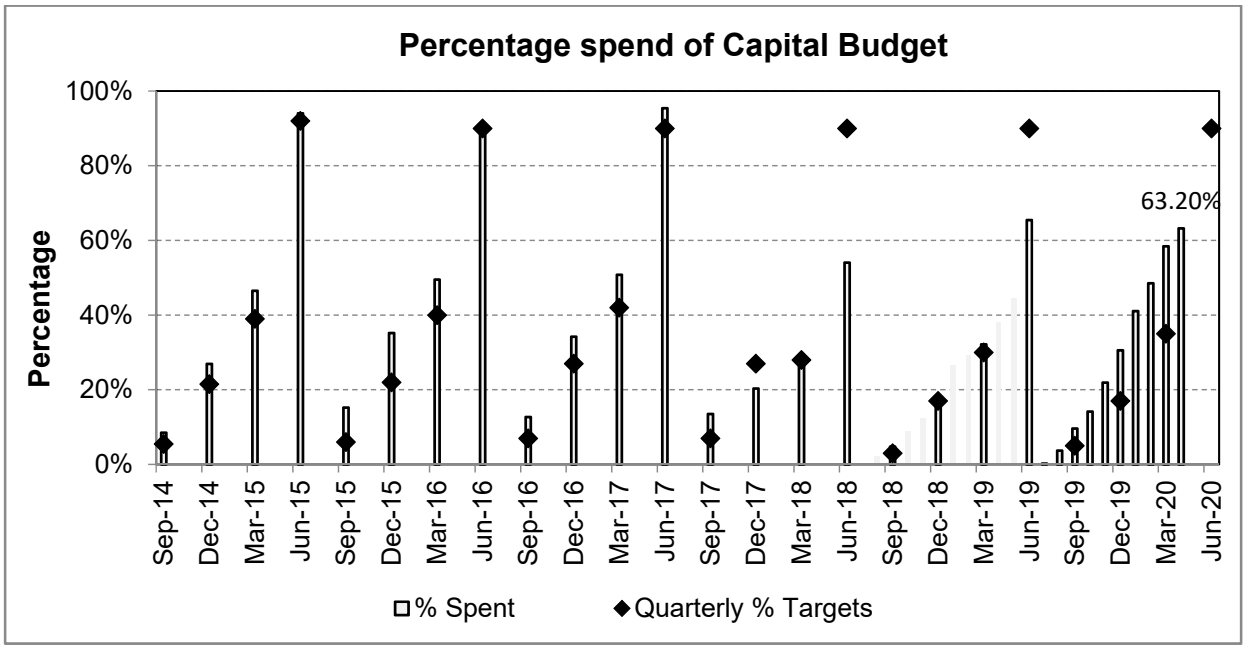
Initially at the beginning of the current financial year the provision of toilets progressed slowly. However, by the end of March 2020 2 573 toilets were provided thereby achieving the 2019/20 SDBIP third quarter target of 1 700. The over performance on toilet installations is linked to the condemnation and replacement programme for Portable Flush Toilets (PFT's which has reached the end of its life cycle and subsequently has to be condemned and replaced), as well as the additional requests from new beneficiaries. At the end of April 2020, 2 594 toilets were provided.



Note that certain toilets may have been vandalised or removed after provision.

4.3 The Well-run City

4.3.1 Percentage spend of capital budget



This indicator reflects the annual accumulative capital expenditure by the Department. It includes growth, refurbishment and replacement of water and sanitation infrastructure and covers all spending relating to the core focus of the Department to provide reliable water and sanitation services to all City of Cape Town customers. (Note the annual targets in the above graph represent 90% expenditure of budget in line with the City's overall target.)

Total capital expenditure for 2018/19 was 65.44%, equivalent to R1 534.99 billion thereby missing the annual target of 90%.

Thus far, for the 2019/20 financial year, the department has been performing well as the percentage capital spent for quarters one to three has been achieved. By the end of April 2020, the total capital expenditure was 63.20%, equivalent to an actual spend of R147 billion.

Financial Implications	☑ None ☐ Opex ☐ Capex ☐ Capex: New Projects ☐ Capex: Existing projects requiring additional funding ☐ Capex: Existing projects with no additional funding requirements
Policy and Strategy	☐ Yes ☑ No
Legislative Vetting	☐ Yes ☑ No
Legal Compliance	☑
Staff Implications	☐ Yes ☑ No
Risk Implications	☐ Yes ☑ No

5. RECOMMENDATIONS

It is recommended that the performance monitoring report BE NOTED.

AANBEVELINGS

Daar word aanbeveel dat daar van hierdie prestasiemoniteringsverslag KENNIS GENEEM WORD.

IZINDULULO

Kundululwe ukuba MAKUQWALASELWE ingxelo engokubek'iliso kwindlela yokusebenza.

LSU REF NO: G0247

ANNEXURES

NONE

FOR FURTHER DETAILS CONTACT

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DIRECTORATE	Water and Waste	FILE REF NO	Water and Waste-Water and Sanitation Management(515072)

Approval Form

Supported for inclusion on the agenda

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WATER AND SANITATION PERFORMANCE MONITORING REPORT: APRIL 2020

Report Reference: 515072
Meeting: Section 79 Portfolio Committee - Water and Waste
Meeting Date: 04.06.2020
Meeting Venue: Committee Room D

Contact Person: Zolile Basholo
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Item	Section	Approver	Approval	Approved Date	Approver Comments
01	Author	SEPTEMBER LEANDRE	Approved	19.05.2020 10:26:23	
02	Director	Zolile Basholo	Approved	19.05.2020 18:58:26	
03	Executive Director	Michael John Webster	Approved	20.05.2020 13:22:49	
04	Legal Compliance	Joan Mari Holt	Approved with Comments	22.05.2020 18:27:42	For information.
05	Chairperson	CLIVE JUSTUS	Approved	25.05.2020 11:17:17	

ECS Officer: