ERWAT: Third Quarter Departmental Performance Reporting Template

2021/22 QUARTERLY REPORTING TEMPLATE AGAINST THE APPROVED BUSINESS PLANS

1. Executive Summary by the Department

ERWAT achieved four (4) out of the six (6) reportable key performance indicators. For Quarter 3, a total of 8 targets were supposed to have been reported however due to 2020/2021 Audit performed on time in this current year, results for Audit Opinion and number of repeat findings were reported in Q2 and not Q3.

ERWAT met its targets on external revenue as all the current projects were maintained. Percentage procurement spend allocated to SMME's was also exceeded due to measures put in place at specification stage to prioritise SMME's on certain contracts. Percentage capital expenditure on planned projects and percentage of repairs and maintenance budget spend were however not met.

The compliance in terms of the wastewater treatment works license conditions and/or exemptions standards target was achieved. It is important to take note that although the target was achieved, serious ongoing challenges remain. These challenges are discussed in detail on the report which includes critical equipment failures, power outages and chemical shortages

ERWAT is striving and working hard towards addressing all Mega Catalytic projects to accommodate new developments within the City of Ekurhuleni. The planned capacity upgrade of the Water Care Works needs to be upgraded urgently to cater for the current backlog in capacity and to make provision for future housing and industrial developments. ERWAT does not have enough Capex funds to implement the upgrade of the Water Care Works.

Table A: Summary of Service Delivery Performance

Service Delivery Monitoring					
	Total number of targets	**Total number of targets set for the quarter**	**Achieved**	**Not achieved**	**Variance**
City Wide SDBIP	3	2	2	0	0
Department SDBIP	5	4	2	2	2

City Wide – 3 Targets were set for Q3 however due to 2020/2021 Audit performed on time in this current year. Results were reported in Q2 and not Q3 therefore, a total of **2 targets were reportable for Q3*

Department Wide – 5 Targets were set for Q3 however due to 2020/2021 Audit performed on time in this current year. Results were reported in Q2 and not Q3 therefore, a total of **4 targets were reportable for Q3*

2. Service Delivery Monitoring

2.1. CITY-WIDE SDBIP

KPI 1 – City-Wide
Total revenue generated from external business

Method of Measure
Increased Commercial Business revenue generated from commercial sources (Absolute Rand Value per quarter). The indicator target is measured cumulatively across the Quarters Revenue generated from: External Income (none NDA)

Evidence
Invoices - (The invoices to be coupled with general ledger with a balance that agree to the amount reported for SDBIP purposes)

Q3 Target
R 1 000 000

Q3 Actual
R 7 993 535

Comment:
The target of R 1 000 000 in external revenue was exceeded.

Reasons for variance

The target was exceeded as department managed to maintain all the current projects

Remedial Actions

Maintain the current client base and prevent attrition.

KPI 2 – City-Wide
Audit Opinion

Method of Measure
The Audit Opinion is defined by the Auditor General. It is given across a qualitative, ordinal scale including Unqualified with no findings; Unqualified with findings; Qualified with findings; Adverse with findings; and Disclaimed with findings. For those who have not completed the process 'Outstanding audits' are recorded.

Evidence
Dated and signed Audit report from AGSA

Q3 Target
Unqualified Audit Opinion

Q3 Actual
N/A – Unqualified opinion reported in Q2

Comment
Unqualified opinion reported in Q2 – The target was incorrectly set for Q3 due to the 2020 AGSA audit being conducted later than usual. The Audit is normally conducted from September (AFS submission 31 August)

KPI 3 – City-Wide
Percentage compliance with wastewater treatment works license conditions and/or exemptions standards

Method of Measure
The indicator measures the compliance of wastewater works effluent to the requirements of biological and chemical indicators as per the water use license granted by the Regulator.

It is calculated by dividing the number of determinants complying to the Water Use Authorization with the total number of determinants.

Evidence
Water quality Data of each Wastewater Treatment Works (from the Lab) Spreadsheet used to calculate over all compliance. Applicable Water use authorization of each Wastewater Treatment Works.

Q3 Target
80%

Q3 Actual
86%

Comment
KPI achieved.
The entity achieved the target. It is important to take note that although the target was achieved, serious ongoing challenges remain. These challenges are discussed below as well as under Section 3.3 (hydraulic capacity).

1. Challenges

   a. Critical equipment failures
   b. Power outages
   c. Chemical shortages

a. Critical equipment failures and power outages:

The following WCWs experienced a number of critical equipment failures during Quarter 3 affecting the compliance of the WCWs even though the target was met.

	Critical equipment failures QUARTER 3 21/22	**Power Failure (hours) QUARTER 3 21/22**
Benoni	8	26
Esther park	1	49
Hartebeestfontein	9	37
Olifantsfontein	25	131
Rynfield	4	34
Ancor	15	54
JP Marais	6	23
Jan Smuts	-	25
Welgedacht	61	13
Daveyton	9	107
Heidelberg	12	81
Herbert Bickley	17	21
Tsakane	20	17
Dekema	05	109

	Critical equipment failures QUARTER 3 21/22	Power Failure (hours) QUARTER 3 21/22
Vlakplaats	09	32
Waterval	85	01

1.2. Chemical shortages that had a direct impact on Water quality Compliance

WCW	Ferric chloride Number of days	Chlorine gas Number of days shortages
Ancor	8	4
Jan Smuts	10	0
Dekema	58	0
Vlakplaats	64	0

Due to ongoing challenges at the manufacturing plants of the sole supplier, a National shortage of ferric chloride and chlorine gas is experienced, impacting directly on the quality of the final effluent. Ferric chloride is used in the treatment process to remove ortho-phosphate and chlorine gas is used to disinfect the final effluent before discharge to the receiving water bodies.

Sewer line blockages:
Welgedacht WCW: As reported in Q1 and Q2, ERWAT is continuing the work on clearing the blockages and repair the damaged pipeline and manholes of the old McComb outfall sewer. Two connection lines to main McComb sewer line were completed in March 2022 and the remaining two connection lines are estimated to be completed by end of April 2022 . Due to heavy rain experienced in the catchment during Q2 and Q3, work was interrupted frequently as the area became inaccessible and unrest in the community halted the project at the beginning of Q3.

Remedial Actions:
Eskom together with CoE energy department were alerted on cable theft and advised on increasing security visibility on their site.

Critical equipment failures
Asset Care plans for critical equipment were developed for all WCW and partially implemented due to a lack of OPEX budget to implement the plans in full.

Power outages
Standby diesel generators were installed at some of the most critical process units of the various WCW, however, some WCW are still awaiting CAPEX funding to procure and install. It must however be noted that standby diesel generators cannot operate for extended outage periods due to the very high consumption rate of diesel.

Chemical shortages
ERWAT is in daily contact with the supplier to secure product and prioritise deliveries according to the stock levels of the various WCW. The service provider intends to shut down the manufacturing plants in July 2022 for a period of 3 weeks to address the ongoing challenges experienced.

2.2 DEPARTMENT SDBIP

KPI – 1 Departmental SDBIP
% Capital expenditure on planned projects

Method of Measure:

Increase ERWAT Wastewater Treatment Plants (WWTP) treatment capacity and improve process efficiency through infrastructure development projects (CAPEX). The total capital expenditure on

major capital projects associated with increasing capacity and improving process efficiency in ERWAT Wastewater Treatment Plant according to green drop requirements and ERWAT Facility Development Plan (FDP 2032).

Evidence
a) Project progress reports (weekly, quarterly and annual reports)
b) Payments certificates
c) Invoices

Q3 Target
80%
Q3 Actual
40.31%

Reasons for Variance

ERWAT has currently spent R 67 353 030 .66 (40.31%) of its capital budget at the end of the second quarter. The planned SDBIP target for the quarter has not been achieved with a 39.69% negative variance. Amongst others, below are the reasons for the poor performance in expenditure.
a) Unavailability of funds to reimburse Suppliers/Contractors on time, this has resulted in delays in completion/ achieving targets of the projects on time
b) Delays due steel strike action.
c) Cancellation of contracts (contracts went beyond 36 months).

Remedial Actions:
The SDBIP target for the quarter has not been achieved with a 44.92% negative variance, however ERWAT is putting measures in place to mitigate the challenges stated above.

ERWAT has completed all procurements of contractors for the allocated budget and will revise all cashflows to ensure acceleration of all the ongoing projects. Furthermore, ERWAT will engage with the city to speed up the backlog of unpaid invoices

KPI – 2 Department SDBIP
Percentage of repairs and maintenance budget spent

Method of Measure
The Indicator measures the total budget spent. The indicator target is measured cumulatively across the quarters.
The indicator formula is:
(1) Expenditure year to date / (2) total approved maintenance budget approved.

Evidence
Finance year to date expenditure report

Q3 Target
75%

Q3 Actual
60%

Comment
KPI not achieved.

Reasons for Variance
The reasons are attributed to the department not being able to utilise critical asset master contracts on time. There is also a backlog in non-payment of invoices

Remedial Action
To ensure that all invoices reach Finance on/before end of May 2022 for payment on time. The department should be able to reach the annual planned target, as the backlog in committed funds are paid in June 2022

KPI – 3 Department SDBIP
Percentage of procurement spend allocated to SMME's

Method of Measure
The indicator measures the percentage of procurement spend allocated to SMME's through ensuring appropriate application of the preferential procurement practices. This support will be calculated aa a percentage of the total value paid to Small, Medium and Micro Enterprises either directly or via the principal contractor in terms of a Preferential Procurement Regulation 4 or 9 contractual condition.

The indicator formula is:

(1) rand value of procurement spend allocated to SMME's / (2) rand value of total procurement spend *100

Evidence
Dated and signed Letter of appointment or subcontract with support (contract) amount Award AND Listing (Register) of SMME supported with support amount.

Q3 Target
45%

Q3 Actual
89%

Reasons for non-compliance
Target exceeded by 44%, as a result of measures put in place at specification stage to prioritise SMME's on certain contracts.

KPI – 4 Department SDBIP
Number repeat audit findings

Method of Measure
The indicator tracks the number of findings made on the same matter as of the last audit cycle. The "Repeat" findings refer to those findings that have persisted from one year of reporting to the next. These are identified as repeat findings by the Auditor-General on the following administrative areas including but not limited to: i) Annual financial statements and annual report.

The formula for the indicator is the (1) Simple count of the number of "repeat" findings itemized in the Auditor-General's report of each municipality

Evidence
AGSA signed management letter

Q3 Target
0

Q3 Actual
N/A –Reported in Q2

Comment
Reported in Q2 – The target was incorrectly set for Q3 due to the 2020 AGSA audit being conducted later than usual. The Audit is normally conducted from September (AFS submission 31 August)

KPI – 5 Department SDBIP
Total rand value of surplus realised from revenue generated from external business

Method of Measure
This indicator measures Total Rand Value of Surplus Realised from Revenue generated from External Business. The Annual Target for the Revenue to be Generated from External Business R56.3m. This will be calculated by subtracting the total expenditure from the revenue generated.

Evidence
General ledger with a balance that agree to the amount reported Invoices Listing

Q3 Target
R1 600 000
Q3 Actual
R3 627 090.04

Comment
Performance was achieved with a surplus of R2 027 090.04

Reasons for achieving KPI
Current client base maintained

3.1 City-Wide/Institutional SDBIP 2021/22

Refer to the City-wide SDBIP 2021/22.

Table1: City-Wide Indicators

NB: Please note that reasons for variance must be provided for both overachievement and under achievement

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2020/21)	Annual Target (2021/22)	Planned Target Quarter 3	Actual Output Quarter 3	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 3	Actual Expenditure Quarter 3
National Prescribed Indicators															
N/A															
Provincial Indicators															
N/A															
City of Ekurhuleni Indicators															
IDP Strategic Objective 2: To build a clean, capable and modernized local state															
Ekurhuleni Water Care Company (ERWAT)	Improved Quality of water (including wastewater)	29	Total revenue generated from external business	Invoices coupled with general ledger with a balance that agree to the amount reported	R24 889 792	R32 200 000	R1 000 000	R7 993 535	R6 993 535	Performance achieved	The target was exceeded	The target was exceeded as department managed to maintain all the current projects	Maintain the current client base and prevent attrition.	OPEX	OPEX
	To build a clean, Capable and Modernised Local State	30	Audit Opinion	Dated and signed Audit report from AGSA	Unqualified Audit Opinion	Unqualified Audit Opinion	Unqualified Audit Opinion	N/A – Unqualified opinion reported in Q2						OPEX	Unqualified opinion reported in Q2 – The target was incorrectly set for Q3 due to the 2020 AGSA audit being conducted later than usual. The Audit is normally conducted from September (AFS submission 31 August).
IDP Strategic Objective 4: To protect the natural environment and promote resource sustainability															

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2020/21)	Annual Target (2021/22)	Planned Target Quarter 3	Actual Output Quarter 3	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 3	Actual Expenditure Quarter 3
Ekurhuleni Water Care Company (ERWAT)	Improved Quality of water (including wastewater)	52	Percentage compliance with wastewater treatment works license conditions and/or exemptions standards	Water Quality Data of each Wastewater Treatment Works (from the Lab) Spreadsheet used to calculate over all compliance. Applicable Water use authorization of each Waste Water Treatment Works	89%	82.5%	80%	86%	6%	Performance achieved	Achieved	1. Reduced number of critical equipment failures. 2. Dilution of inflow due to stormwater ingress. Target was reduced from 85% in Q1 & Q2 to 80% in Q3 & Q4.		R149 165 230	R115 897 141.34

3.2 Entity's SDBIP Score card with Key Performance Areas and Indicators 2021/22

Table 2: Entity's SDBIP

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2020/21)	Annual Target (2021/22)	Planned Target Quarter 3	Actual Output Quarter 3	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 3	Actual Expenditure Quarter 3
IDP Strategic Objective 2: To build a clean, capable and modernized local state															
Ekurhuleni Water Care Company (ERWAT)	Improved Quality of Water including Wastewater	1.M	Percentage Capital expenditure on planned projects	Finance year to date expenditure report	100.26%	95.00 %	80.00%	40.31%	-39.69%	Q3 target not achieved	Q3 target not achieved	Delay in payment of invoice from CoE Delay in delivery of equipment due to the steel strike	continuous engagement with city (finance) to speed up payment Acceleration of all projects spending well.	R133,420,000	R67,353,030.66

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2020/21)	Annual Target (2021/22)	Planned Target Quarter 3	Actual Output Quarter 3	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 3	Actual Expenditure Quarter 3
	Improved Quality of Water including Wastewater	2.M	Percentage expenditure on repairs and maintenance budget	Expenditure report from Finance AND Listing of R&M vote numbers and expenditure	84%	95.00 %	75.00%	60%	15%	Performance not achieved	Not achieved	The reasons are attributed to the department not being able to utilise critical asset master contracts on time. There is also a backlog in non-payment of invoices	To ensure that all invoices reach Finance on/before end of May 2022 for payment on time. The department should be able to reach the annual planned target, as the backlog in committed funds are paid in June 2022.	R100 014 472 .00	R59 777 406.61
	Improved Quality of Water including Wastewater	3.M	Number of Repeat Audit Findings	AGSA signed management letter	4	0	0	N/A – Reported in Q2						OPEX	Reported in Q2 – The target was incorrectly set for Q3 due to the 2020 AGSA audit being conducted later than usual. The Audit is normally conducted from

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2020/21)	Annual Target (2021/22)	Planned Target Quarter 3	Actual Output Quarter 3	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 3	Actual Expenditure Quarter 3
															September (AFS submission 31 August).
	Improved Quality of Water including Wastewater	4.M	Percentage of procurement spend allocated to SMME's	Dated and signed Letter of appointment or subcontract with support (contract) amount Award AND Listing (Register) of SMME supported with support amount	R105 810 543	45%	45%	89%	Exceeded by 44%	Exceeded R36 052 086	Target met	Contracts concluded with SMME companies for a period of 3 years and awarded RFQs and FPQ to SMME owned companies	None	OPEX/ CAPEX	R36 052 086
	Improved quality of water including waste water	5.M	Total rand value of surplus realised from revenue generated from external business	General Ledger with a balance amounts that agrees with the amount reported AND Listing of invoices	New KPI	R6 500 000	R1 600 000	R3 627 090.04	R2 027 090.04	Q3 Target achieved	Q3 target achieved	Current client base maintained	No action required	OPEX	OPEX

3.3. Reflection on operations/ day-to-day activities (Analytical Narrative Account)

A Flows

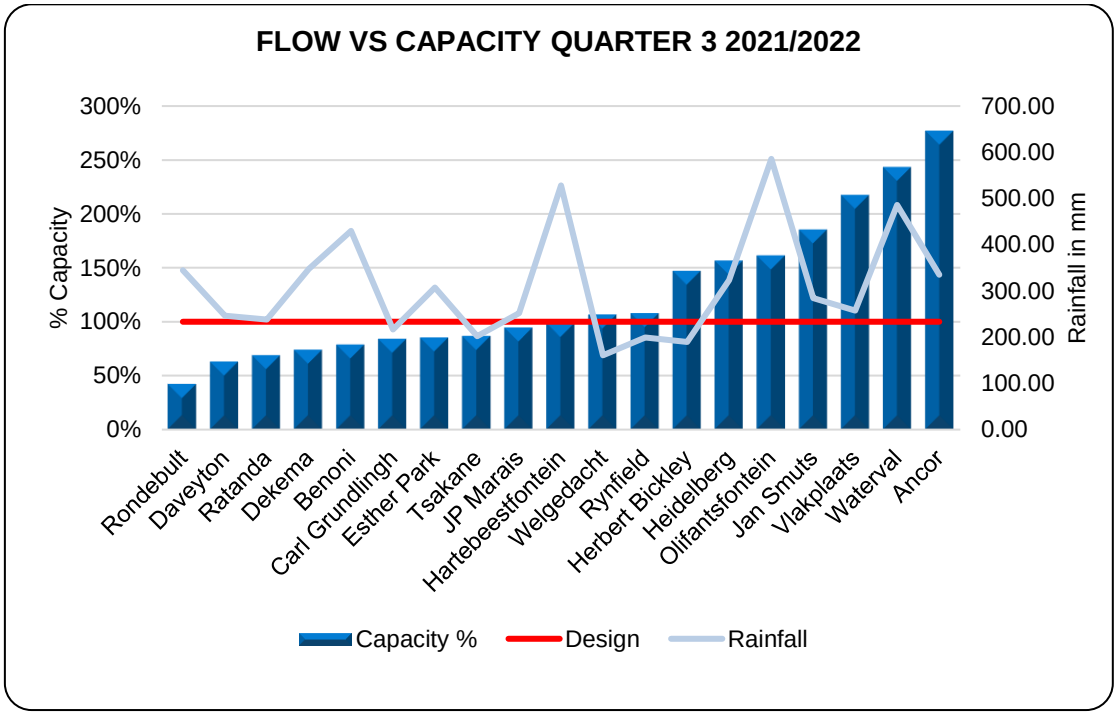


Figure 1

A total of 86 986 Ml was treated in Quarter 3, at an average of 967 Ml/day, utilising 156 % of the capacity as compared to Q2 where a total of 77 724 Ml was treated at an average of 845 Ml/day, utilising 136 % of the hydraulic capacity. The increase in flow can be contributed to the heavy rainfall received with storm water ingress into the sewer network.

3.3 Service Delivery Highlights and Challenges

Flows

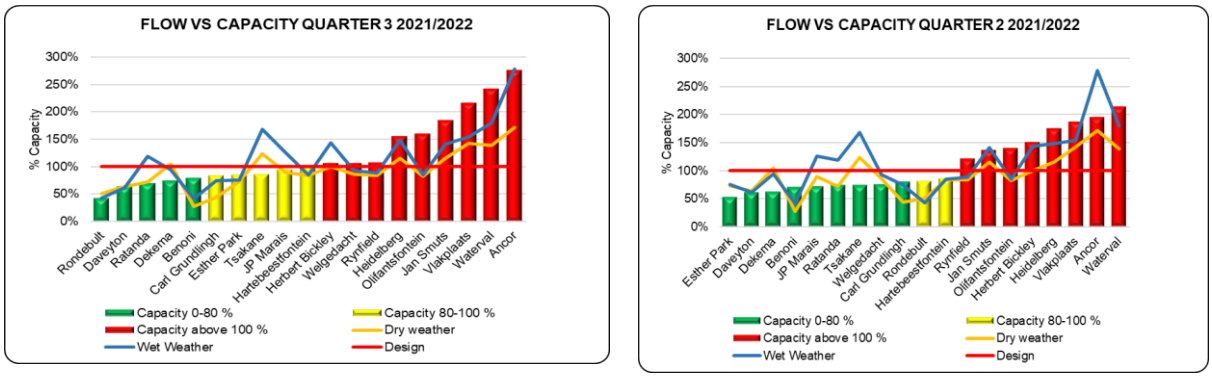


Figure 2

As can be noted in the above graph, during Q3 nine (9) out of nineteen WCW were operating above their hydraulic design capacity, five (5) operating between 80% and 100% and five (5) below their hydraulic design capacity. In Q2 eight (8) out of nineteen WCW were operating above their hydraulic design capacity, two (2) operating between 80% and 100% and nine (9) below their hydraulic design capacity. The increase in the % hydraulic capacity during Q3 can be contributed to the heavy rainfall in Q3 with significant stormwater ingress to the sewer network.

Ancor operated at 227%, Jan Smuts at 185%, Heidelberg at 156%, Herbert Bickley at 106% Olifantsfontein operated at 161%, Welgedacht at 106%, Rynfield at 108% of its capacity, with large regional plants such as Vlakplaats operating at 217% and Waterval operating at 243%. Additional capacity is urgently needed and for Olifantsfontein WCW, Biofilter project need to be fast tracked especially the pipelines to feed all six biofilters.

Plant	Design Capacity	Actual Q3	Rainfall Q3
Ancor	15.00	41.48	335
Benoni	7.50	5.90	230
Carl Grundlingh	5.20	4.36	306
Daveyton	19.00	11.97	291
Dekema	31.00	22.93	316
Esther Park	1.40	1.19	387
Hartebeestfontein	63.00	61.95	402
Heidelberg	5.40	8.44	361
Herbert Bickley	15.10	16.02	370
Jan Smuts	6.00	11.10	409
JP Marais	15.00	14.17	490
Olifantsfontein	65.00	104.65	293
Ratanda	4.70	3.23	428
Rondebult	20.00	8.44	328
Rynfield	9.80	10.56	348
Tsakane	20.00	17.31	299
Vlakplaats	55.00	119.47	385
Waterval	170.00	413.20	264
Welgedacht	95.00	101.12	231

ERWAT does not have Capex funds to extend/upgrade the WCW that require additional capacity, and therefore have serious challenges in supporting the CoE in meeting the Growth Development Strategy (GDS2055) and the development of the Aerotropolis. However, the CoE has provided budget in 2021/2022 to commence with the upgrade of six (6) of the most overloaded WCW. Professional Service providers were appointed by CoE and the project is at the inception phase.

2.3 Organic Loads

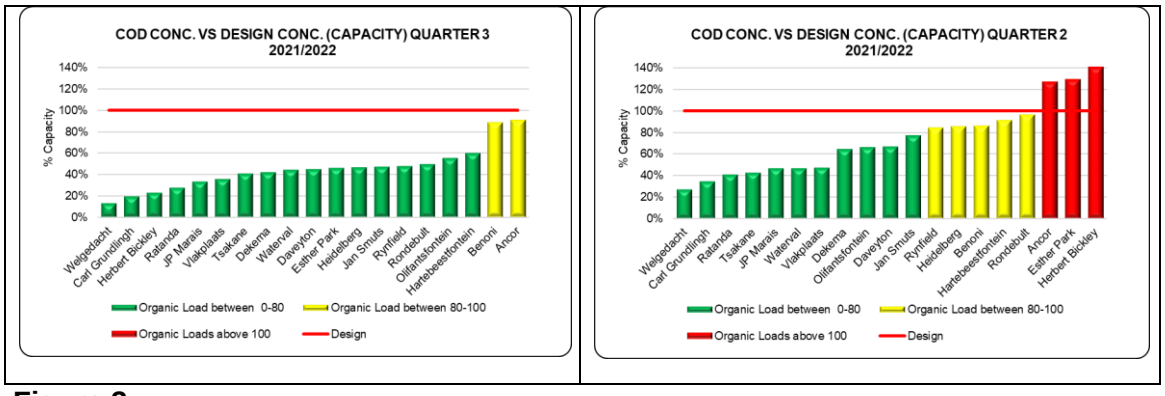


Figure 3

As can be noted, for Quarter 3, 2 WCW's operated between 80-100% of the organic design capacity and 17 below their design capacity, as opposed to Quarter 2 where 3 WCW's operated above 100% of their organic capacity, 5 WCW's between 80-100% and 11 below their design capacity. Due to the extensive wet weather experienced in Q3, storm water dilution resulted in a lower % organic capacity as opposed to Q2.

3.4. Service Delivery Highlights and Challenges

Plant Specific Challenges

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
Benoni	The Plant complied with overall WUL effluent standards with compliance of Chemical= 93% Physical= 98% Micro= 93% And the overall compliance is 95% in Q3	Plant operated at 79 % of re-graded hydraulic capacity in Q3	Plant operated at 71% of re-graded organic capacity in Q3	There were abnormal flow fluctuations in Q3 due to maintenance that was done at Tom Jones pump station.	There were 3 Industrial pollution in Q3	There were 8 critical equipment' failures in Q3	There were 9 power outages in Q3 and duration was 26 hrs 27 mins	Open digesters walls are cracking, Humus tank weirs plates worn out	None	None	Dried sludge is stockpiled on the plant	Unlined sludge paddies and maturation ponds could cause possible ground water pollution in Q3	None	None	Sludge classification A2b is suitable for the instant lawn application according to WRC guidelines. Screenings and grits that are generated at the plant are collected by CoE.	None	None
Esther Park	Plant complied with both the target of 90% and the WUL standard best practice of 90% Q3 2021/ 2022 Physical: 97% Chemical: 91% Micro: 81%. Q3 overall compliance = 90%	Plant operated at 85 % of hydraulic capacity (Based on regraded capacity of 1.4 Ml/d)	Plant operated at 46 % of organic capacity for Q3	28x abnormal flows recorded for Quarter 3 above regraded design capacity of 1.4 Ml/d	5x Industrial effluent pollution incidents in Q3.	1x critical equipment failure occurred in the quarter (RAS pump no1 was defective)	13x power failure incidents recorded in Q3 lasting for total downtime of 49 hours. – Load shedding	Reactor walls are leaking	Not applicable	None	Not applicable	Not applicable	Not applicable	Not applicable	Screenings and grits is collected by the CoE	Access road is slippery in the rainy season.	Drop in water pressure occasionally that affects chlorine dosing

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
Hartebeestfontein	Plant complied with WUL effluent standards target of 80% and did not comply with best practice target of 90%. Q3 2021/2022 Physical: 100% Chemical: 98% Micro: 70% Overall compliance: 89%.	Plant operated at 98% of hydraulic capacity.	Plant operated at 60% of organic capacity	Abnormal fluctuations in inflows in Q3 was in January and February, with average flows of 65Ml/d and 67 Ml/d.	Plant received industrial high strength effluent on 20 of 90 days in Quarter 3.	09 Critical equipment failures occurred in Quarter 3.	There were 7 power outages in Q3 for duration of 34 hours	Aging infrastructure.	Digester 1, 4,6 and 9 sludge recirculation nozzles blocked	There were no veld fires experience Quarter 3	1 386 000 kg of dry sludge was irrigated to the 200 hectares farm.	Borehole two has high concentration of Nitrates.	Sinkhole next to the fence towards FST 5 & 6 and around the Farm.	License amendment with relaxation on Electrical conductivity, Ammonia, E.coli and COD	Sludge classification is B2c, not suitable for the intended purpose; this requires further engagement with the farmer.	All roads are accessible, however grading needs to be done around the fence by 31 May 2022	There was 1 portable leak of main line feeding farm houses
Olifantsfontein	Plant did not comply with WUL effluent standard Plant complied with 58% in	Plant operated at a hydraulic capacity of 161% in Q3	Plant operated within design capacity at 55% in Q3 2022	There were abnormal fluctuations of inflows in Q3 2022	Plant received industrial high strength effluent	25 critical equipment failures occurred in Q3 2022. January 5	There were four Power failures with total of 131 hours with	Module 3 Anaerobic digesters.	Digester 4 of 6 digesters are blocked due to sand	There were no veld fires in Q3 2021 - 22	Total sludge of 647 705 kg was produced in Q3 with the	Unlined emergency dams contaminating	2 x Sinkholes behind and in front of the old	Olifantsfontein WUL is stringent on Ammo	Sludge is classified into three streams: (1). Dewatering unit(B3a), the sludge not suitable for	Road to upstream sampling point need to be	YES, there is a water leak that is reoccurring and

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
	March 2022. Physical: 52% Chemical: 47% and Micro: 74%. The average compliance target of 55% was achieved although the Q3 2021/22 did not achieve the target with 42% January 34% February 34% March 58%	January 163% February 167% March 154%	January 51% February 54% March 61%	due to rainfall. With peak flows of 180 ml/d in January and 293 mm rain for the quater.	(very high Electrical Conductivity above 100 mS/m) with 20 days in Q3 2021-22 with the month exceedance of January 9 February 4 March 7 Plant also experiences fine sand ingress.	February 8 March 12	the fuel consumption of 7374 litter January 4hrs - 364 L February 128hrs – 7010L		accumulation		monthly production of 235 834 kg in January 2022 and February 201 298 kg March 210 573 Kg. Sludge is disposed on different farms around Bapsfontein area and is used for agricultural purposes	g borehole no.2&3. Borehole 1 runs dry during dry seasons	laboratory which occurred in Dec 2019 still not rehabilitated	nia of < 2mg/l, SS of 15 mg/l and EC of < 80 mS/m.	cultivating crops such as fruits trees (2). Drying beds (A3a), No restrictions and requirements apply 3) Grit and screenings is waste that should be dumped at specialised land fill under strict conditions to ensure ENV compliance, waste management by the city has been affected by lack of collection from site, leading to stockpiling.	graded and there is high erosion on the banks. To be reported to the CoE..	resulting in water loss
Rynfield	Plant did not comply with WUL effluent standard Plant complied with 90% in	Plant operated at 108% of re-graded hydraulic capacity in Q3,	Plant operated at 48% of re-graded organic capacity in Q3	There was normal flow but high inflow received during February	None	There were 4 critical equipment' failure in Q3.	There were 4 power outages in Q3 with total hours of 34hrs.	. Pavement Cracked and Digesters &	None	None	Dried sludge is stockpiled on the plant	Unlined sludge paddies and maturation ponds	None	None	CoE collects screenings and grits from the inlet works. Dried sludge is stockpiled on the plant	None	None

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
	Q3. Compliance in Q3 2021-2022. Physical: 99% Chemical: 97% and Micro: 83%.	which was above the design capacity.		due to rain.				reactor tank concrete structure is cracked .Bio-feeder structure is cracked				could cause possible ground water pollution					
Ancor	Plant compliance for Q3 is 62% Non-compliant parameters: Chemical 71%, Physical 83% and Micro 33 %	Plant operated at 277% of its hydraulic capacity	Plant operated at 92% of organic capacity, which is lower than the loads received pre-lockdown, Q3-.	Ancor experienced storm water ingress during heavy rainfall, worsening the overloaded hydraulic capacity; however, the RSA COVID -19 lockdown reduced flows to the WCW.	Plant received high COD industrial effluent on 3 of 90 days. In Q3, decrease due to stormwater ingress	15 critical equipment failures occurred in Q3,	21 outages occurred (54 hrs. total) (Generator backup available for whole plant except disinfection section).	Bio filter flow division boxes partially collapsed, humus tanks/ PST's- and digesters structures are crumbling /cracked	3 digesters blocked with sand and are not in operation. This cause the plant to run out of sludge handling capacity, which prevent proper desludging and resultin	No veldfires occurred during Q3.	Stockpile area not lined. Stockpiles on plant is a risk due to veldfires and environmental pollution	Unlined sludge paddies pollute underground water	Area around humus tanks and final effluent channel are dolomitic according to Geotech study performed.	N/A	CoE removes solid waste (screenings and grit).	Access road in bad condition with lots of potholes	N/A

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
									g in non-compliances.								
Daveyton	Plant complied; compliance for March is 97.0%.	Plant operated at 55% of its hydraulic capacity.	Sufficient capacity. Plant operated at 47 % of its organic capacity.	Numerous sewer blockages in the CoE network and potable water supply interruption to Etwatwa lead to inconsistent and irregular flow to the plant.	N/A. Domestic only.	3 Critical equipment failures occurred in March, namely: RAS pumps.	30 power outages occurred in Q3 lasting 107 hours in total. Power outages was due to load shedding on the network.	CCT sometimes leaking. Do not have direct impact on the operation of the plant at the moment	N/A	Veld fires pose a risk during winter, but no incidents during March.	Sludge lagoons are unlined Space for solar drying is in-sufficient	Unlined sludge lagoons pollute the ground water.	N/A	N/A	Screenings is collected by COE for proper disposal.	N/A	N/A
JP Marais	Plant compliance for Q3 is 95%.	Sufficient capacity. Plant operat	Sufficient capacity. Plant operat	Low incoming flows in Q3 due to Benoni	None in Q3	6 critical equipment failures occurred in Q3,	11 Power outages due to load	None	N/A	No veld fire incident experi	Sludge pumped to Welgedacht, where	Some boreholes polluted. Ongo	No dolomitic soil	N/A	CoE removes solid waste (screenings and grit) except for	N/A	N/A

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
		ed at 94% of hydraulic capacity	ed at 33% of organic capacity	and Modderbee outfall sewer lines blockage. Blockages cleared on the 6th and 8th February respectively		namely; 1x WAS pump no 1, 1 x Raw sampler, 1 x A-recycle pump, 2 x RAS pump and 1 x Chlorine suction pipe	sheddin g			enced in Q3	it is treated.	ing monitoring of boreholes.			PST screenings, due to no screen compactor.		
Welgedacht	Plant compliance for Q3 is 97%.	WCW operated above design capacity of 106% of its capacity	Sufficient capacity WCW operated at 13% organic capacity. Low 13% is due to blockages and ongoing damage	Damaged and blocked manholes at Old McComb sewer line still impacting on Plant flows	1 x Coloured influent	61 critical equipment failures occurred in Q3, Module 1 MCC electrical panel must be replaced. Blocked sewer line at	4 x power outages which lasted for 13 hours due to failures at Eskom substation supplying Welgedacht	N/A	N/A	No veldfires occurred during Q3.	None	Unlined Dechlorination channels and Emergency dam	N/A	N/A	CoE removes solid waste (screenings and grit).and dispose at licensed solid waste site.	Gravel access road in very bad conditions and very slippery when wet.	No potable water supply to the plant. Borehole water used for hygiene. Drinking water is being transported in from other plants.

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
			to the line by illegal miners in the Old McComb works area.			McComb ,Scada system X3, Module 1 MCC, Aerators x 6, Sluice gate, PST waste pump X3, V-belts worn-out x 5,Chlorine booster pump x6, Bridges x6, Slovo pump station, Poly make up system X4, Reactor A MCC x2, Chlorine pigtails, Screen x 2, , Fluidization pumps x 2, Compactor x 2, Blocked PTS's, Ferric pumps,	substation										

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
						Wash water pumps, MV Transformers X2, and generator change over system x3, auto sampler, ,mixer, Screw pumps and emergency dam valve.											
Jan Smuts	Plant compliance for Q3 is 92%.	Plant operated at 185% of its hydraulic capacity	Plant operated at 69% of its organic capacity.	Four (4) days of High incoming flows in Q3	Plant received industrial high strength effluent on 0 of the 91 days in Q3.	No critical equipment failure occurred in Q3 except the irrigation pump's motor and we had to	8 Power outages (25 hours total) due to loadshedding, Generator backup is available for	Humus Tanks scum boards, digester number 2's wall, drying beds' walls and the bio-filters' feed	None	No veldfires during Q3	Dried sludge is stockpiled on site.	Unlined sludge stockpile area can cause groundwater pollution.	No	No	Screenings incinerated at the plant and the grit buried at the plant. This practice does not comply with WUL conditions.	Fair	Rand Water

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
						lower the chlorine pumps in the sump to be able to still dose chlorine when water levels are low	entire plant	flow division box/tower.									
Heidelberg	Plant Compliance for Q3 is **(91.77%).** Physical 100%,Chemical 82.71% and Micro 92.61%	Plant operated at 156% of its hydraulic capacity	Plant operated at 70% of organic capacity	High incoming flows	Plant received high COD industrial effluent on 3 of 90 days and high SS on 3 days of 90.	12 Critical equipment failures for Q3 2x Aerators (2x Clarifier Bridges, 4x Inlet Raw pumps ,2x Sludge pumps, 1x	Heidelberg had 26 power outage with a duration of 81 hours. Diesel used was 4655 L	The joint sealants of Carousel reactor concrete wall are damaged	None	No veldfires occurred during Q2.	Sludge at the plant stockpiled after dewatering, and is also applied /irrigated to the lands and could potenti	Unlined sludge paddies/lack of groundwater monitoring in the sludge paddies	None	None	Screenings and grit generated at the plant buried and this practice is not environmental friendly. Potential groundwater pollution	The access road to Heidelberg works is severely damaged and a new-tarred road is required urgently	None

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
						Chlorine dosing pumps, and 1x Belt press					ally contaminate groundwater resources						
Herbert Bickley	Plant Complied with WUL effluent standards (**92%**)	Plant operated at 147% of hydraulic capacity	Plant operated at 40% of organic capacity	High incoming were experienced in Q3.	Plant received industrial high strength effluent on of 90 days	3 Critical Equipment (booster pumps, sludge to land pump, chlorine dosing systems, RAS Pumps and raw sludge recycle and desludging pump)	Herbert Bickley had 3 power outages which lasted 21 hours Diesel used was 1800L	Anaerobic digesters cracked concrete structures, Biofilter 1 ans 2 have cracked concrete structures,	6 out of 8 digesters not in use due to blockages and leaking digester pipes	No veldfires occurred during Q3.	Sludge used for irrigation on at instant lawn	Irrigation of sludge for Instant lawn is a source of pollution Activities are carried out as per Guidelines	None	None	Collected by CoE to a dedicated landfill site	Access road to the plant damaged and requires an upgrade	None

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
Tsakane	Plant compliance for Q3 is 89.64%.	Sufficient capacity. Plant operated at 87% of hydraulic capacity.	Sufficient capacity. Plant operated at 83% of organic capacity.	Minimal incoming flow was experienced at the plant due to equipment breakdowns and spillages at Reticulation pump stations (Rockville, Extension 11 and 22)	Plant received high COD industrial effluent on 2 of 90 days.	20 critical equipment failures occurred in Q3, namely; RAS pump no.1 blockages (4 times). Both Degritter pump no.1(1 time) and Degritter pump no2 (2 times)Sludge to land pump no.2 (1 time) Chlorine system(	Tsakane had 17 power outages which lasted 57 hours Diesel used was 4780L. 1 x Backup generator available.	Digesters and channel for raw sewage feeding HYBACS concrete structures cracked and leaking	N/A	No veldfires occurred during Q2	Sludge pumped to unlined lagoons/paddies for solar drying. Drying beds have been decommissioned	Unlined sludge lagoons and paddies/lack of groundwater monitoring at the sludge lagoons and paddies. Unfenced drying paddies	None (There's a dolomitic report that shows none at Tsakane)	None	Screenings and grit collected by CoE to a dedicated landfill site	None	Potable water leak next to Tsakane hostel. It also create a wetland next to the fence.

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
						2 times), Compactor no.1 (1 time), Outlet flow meter (1 time), Scum pump (2 times), Anaerobic mixer no.2 (1 time) Sludge to land pipeline (2 times), mechanical fine screen (1 time), Aerator no.6 (1 time), and clarifier											

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
						bridge no.1 (1 time)											
Carl Grundlingh	Plant Complied with WUL effluent standards (**95.81%**)	Plant operated at 79.17 % of its hydraulic capacity	Plant operated at 34.52 % of organic capacity	None	No Pollution	3 x Critical equipment failures for Q3 (Brush Aerator & Floating Aerator)	None	None	N/A	No veldfires occurred during Q2	Land application of sludge is being used	Unlined sludge to land posing ground water pollution	None	None	Collected by CoE to a dedicated landfill site	Access road to the plant is damaged and requires an upgrade.	None
Ratanda	Plant Complied with WUL effluent standards (97 %)	Plant operated at 68% of its hydraulic capacity	Plant operated at 17% of organic capacity,	Experienced low inflow on 28 January 2022 due to blocked manhole in extension 7, also on 10 Februar	None	1 Critical equipment failures for Q3 Borehole pump,	Ratanda had 8 power outages with a total duration of 59 hours in Q2	Drying beds drainage system and chlorine contact tanks are badly leaking structures	N/A	None	Dried sludge is stockpiled on-site, potential ground water pollution	Unlined sludge ponds and leaking drying beds, potential groundwat	None	None	Screenings and grit generated at the plant are still being buried and this practice is not environmental friendly. Potential groundwater pollution	The access road to Ratanda Works is severely damaged and a new-tarred road is require	No link to the Municipal Potable Water Supply, water transported from Heidelberg Works

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
				y due to shortage of portable water and blocked manhole. low inflow also exprienced in March due to collapsed outfall sewer and manhole blockages,								er pollution				d urgently	and borehole water is used for other domestic purposes
Dekema	Plant did not comply with WUL effluent standard Average compliance : 83% Compliant	Plant operated at 74% of hydraulic capacity	Sufficient capacity. Plant operated at 41% organic capacity	Plant received high flows on 0 out of 90 days	Plant received high COD industrial effluent on 0 of 90 days	5 Critical equipment failures occurred in Q3 – Namely : PST 11 rotating	27 Outages occur (109 hrs total) Load shedding is a big concern.	Channels feeding sections partially collapsed. Biofilters and digester	1 out of 12 Anaerobic digesters is blocked	No veld fires occurred during Q3	Sludge pumped to unlined paddies for solar drying and dried sludge	Unlawful disposal of grit and screenings (grit and	None	N/A	Screenings and grit generated at the plant are still being buried and this practice is not environmental friendly.	The access road to Dekema WCW needs to be tarred as it gets	N/A

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
	Parameters - Physical – 94% Chemical: 80% Micro: 76%					bridge wheel, Biofilter 8,11&12 centre columns, Fine screen screw conveyor		s wall are cracked.			spread to land area to be ploughed into land.	screenings are buried on-site in a trench).			Potential groundwater pollution	muddy and slippery during rainy season.	
Rondebult	Plant did comply with WUL effluent standard Average compliance :98% Compliant Parameters - Physical – 100% Chemical: 97% Micro: 97%	Plant operated at 42% of hydraulic capacity.	Plant operated at 49% of organic capacity.	High flows of up to 13 Ml/day occurred from dates due to storm water ingress. Total rainfall measured at the plant was 321 mm for Q3	Plant received industrial high COD effluent on 1 of 92 days	3 Critical equipment failures for Q3. January 2022. 1x Primary bio filter feed pump pipeline No Critical equipment failure reported for the month of	10 Outages occur (25 hours in total) due to load shedding) Genset installation project for process continuity during power failures commenced on the 16th March 2022	Biofilter walls cracked. Brickwork of open channels are unstable, collapsing and cracked. The feed pipe from the primary biofilters to the secondary	None	The works did not experience any incidents of veld fire during Q3	Dried sludge is stockpiled on the plant. Demand for instant lawn application is seasonal	Biofilter walls cracked. Brick work of open channels are unstable, collapsing and cracked. The feed	The entire area of the plant are dolomitic	N/A	Screenings and grit generated at the plant are still being buried and this practice is not environmental friendly. Potential groundwater pollution	The access road are deteriorating fast and will need attention soon.	Underground rusted pipe works needs to be replaced

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
						February 2022. March 2022. 1x Ferric chloride dosing pipeline 1x leaking digester		biofilters has collapsed.				pipe from the primary biofilters to the secondary biofilters has collapsed.					
Vlaklaats	Plant did not comply with WUL effluent standards: Average compliance: 44% Compliant Parameters - Physical – 80% Chemical: 39% Micro: 12%	Plant operated at 223% of hydraulic capacity. Needs to be upgraded	Plant operated at 33% of organic capacity	High flows of up to 176 Ml/day occurred from dates due to storm water ingress. Rainfall measured at the plant was 289 mm.	Plant received industrial high strength effluent on 0 of 90 days	33 Critical equipment failures occurred in Q3 - Namely: 2x failures of the ferric chloride dosing system ,2x Failures of DAF recycle	39 Outages occur (149 hours in total) Loadshading is a major concern.	Office building have some cracks.	None	No veld fires occurred during Q3.	Dried sludge is stockpiled on the plant. Demand for instant lawn application is seasonal	Unlined Emergency dams. Unlawful disposal of grit (grit is buried on-site in a trench).	None	None	Screenings and grit generated at the plant are still being buried and this practice is not environmental friendly. Potential groundwater pollution	Unlined Emergency dams. Unlawful disposal of grit (grit is buried on-site in a trench).	

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
						pump,7x failures of raw sludge transfer pumps. , 2x Failure of Ferric transfer pump, 6x failure of mechanical screens, , 1x Failure of raw sludge fine screen sensor,1x failure of DAF Scrapper. 4x Failure of PST desludging valves 2x failure of anoxic mixers,1x failure of DAF												

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
						sludge sump mixer, 5x Failure of Humus pumps											
Waterval	Plant did not comply with WUL effluent standards: Average compliance: 86% Compliant Parameters - Physical – 94% Chemical: 79% Micro: 85%	Plant operated above capacity (operated at 243% capacity)	Sufficient capacity Plant operated at 49% organic capacity.	Average flow of up to 408.1 Ml/day received due to developments and bypasses for upstream plants.	Plant received industrial high strength effluent on 0 of 59 days. Plant is receiving and treating 30 m^3 of leachate daily from Enviro Serv	85 Critical equipment failures occurred in Q3 2022 Mainly from 11 x DAF Recirculation pumps, DAF top scrapper, 10 x PST and transfer pump failures, 8 x power dip cut, 5 x SSTs failures, 10 x inlet screen failures, 11 x blower failures , 1 x planned blower	4 Hours planned blower outage	None	None	No veld fires at sludge land occurred during Q3	Dried sludge is stockpiled on the plant. Demand for agricultural application is seasonal.	Unlined Emergency dams. Unlawful disposal of grit (grit is buried on-site in a trench).	None	N/A	Screenings and grit generated at the plant are still being buried and this practice is not environmental friendly. Potential groundwater pollution	N/A	

Plant	Non-compliance of final effluent	Hydraulic Capacity	Organic Capacity	Abnormal fluctuations in inflow	Industrial effluent	Critical equipment failures	Power outages	Ageing infrastructure	Blocked digesters	Veld fires	Sludge stockpiling	Groundwater pollution	Dolomitic soil	Very Strict WUL standard	Solid Waste Management	Access Roads	Potable water
						shut down, 6 x RAS pump, 11 x aerator failures, 1x PST bridge failure, 2 x chlorine wash water failure,7 x cornel pump failures, 1 x draw off pump failure, 1 x fluidising pump failure											

3.5. Project/Infrastructure Report

This section includes all major projects that will contribute to the Mega Catalytic projects. ERWAT receives new township applications timeously from CoE and provide responses about the capacity availability at various Water Care Works as and when applications are received. This section focuses on feasibilities studies and major projects at ERWAT Water Care Works (WCW), for projects that contribute either directly or indirectly to the flagship projects. Below is the summary of these planned and running projects that have been identified to address planned Mega Catalytic Projects within City of Ekurhuleni (CoE).

3.5.1 Running Projects

3.5.1.1 Olifantsfontein WCW refurbishment/upgrade project

3.5.1.1.1 This contract covers the design and construction of Module 3 refurbishment. This module was previously decommissioned due to a collapse of existing PST and equipment running outside their useful service life, repairs and maintenance.

3.5.1.1.2 Designs for the upgrade of the entire plant (Modules) is ongoing and will be completed in the 2022/23. the construction thereof will be on hold pending availability of funds. the current approve MTREF budget is insufficient to cover all the cost required for the plant upgrades.

3.5.2 Planned Projects

This section includes all major projects that will contribute to the Mega Catalytic projects such as the John Dube Development. ERWAT receives new township applications timeously from CoE and provide responses about the capacity availability at various Water Care Works as and when applications are received. This section focuses on feasibilities studies and major projects at ERWAT Water Care Works (WCW), for projects that contribute either directly or indirectly to the flagship projects. Below is the summary of these planned and running projects that have been identified to address planned Mega Catalytic Projects within City of Ekurhuleni (CoE).

3.5.2.1 Ancor WWTW

The Ancor Works is situated in Springs and falls within the DD5 drainage district. The original design capacity of the plant was 32 Mℓ/d. Conventional biological filtration is employed as the main treatment process. The plant capacity has been downgraded to 15 Mℓ/d. The plant is currently operating at 202% above its hydraulic design capacity, which leads to poor quality of the final effluent. Ancor has older trickling filter technology, which is not suitable to treat high strength sewerage containing industrial pollutants. The new Daggafontein Megacity that is currently under construction directly opposite the plant will require a connection to the Ancor outfall were within this financial year.

Plans are currently underway to upgrade the plant to 52 Mℓ/d in order to enhance the treatment capacity. These upgrades will ensure that future developments flows are accommodated thereby meeting the required standards as stipulated by the department of water and sanitation (DWS).

	PLANNED PROJECTS	BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
1	30 Mℓ/d Plant Upgrade	R351 000 000.00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 52 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth. Pending availability of funds, the R 351 000 000.00 budget required will accommodate 30 Mℓ/d of 52 Mℓ/d.	The implementation/commissioning of the project is subject to the availability of funds.

3.5.2.2 Vlakplaats WWTW

Vlakplaats is situated in Vosloorus and falls within the DD6 drainage district. The original design capacity of the plant was 83 Mℓ/d. The plant capacity has been downgraded to 55 Mℓ/d. The plant operated at 156% above the design capacity (i.e., 101 Ml/d) above its hydraulic design capacity, which leads to poor quality of the final effluent. Vlakplaats flow distribution project is currently under construction phase to augment and add a peak flow balancing capacity into the plant by converting the old existing ponds into a balancing tank. Plans are currently underway to upgrade the plant to 189 Mℓ/d in order to enhance the treatment capacity. CAPEX funds have been requested for the additional 41 Mℓ/d of 189 Mℓ/d for design-built, but no funds for FY 19/20 available.

These upgrades will ensure that future developments flows are accommodated thereby meeting the required standards as stipulated by the department of water and sanitation (DWS).

PLANNED PROJECTS		BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
1	Plant Upgrade/Retrofit-Activated Sludge	R203 340 000.00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 189 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth. Pending availability of funds, the **R 203 340 000.00** budget required will accommodate 41 Mℓ/d of 189 Mℓ/d for design-built.	The implementation/commissioning of the project is subject to the availability of funds..
2	Plant Upgrade/Retrofit-Bio filter	R 108 000 000.00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 189 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth.	The implementation/commissioning of the project is subject to the availability of funds..

PLANNED PROJECTS		BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
			Pending availability of funds, the **R 108 000 000** budget required will accommodate 18 Mℓ/d of 189 Mℓ/d for design-built	
3	Flow distribution	R 40 000 000.00	Current phase of upgrade Project cancelled due to expiry of contract (beyond 36 months) Legal action has been pursued with by the contractor	The implementation/commissioning of the project is subject to the availability of funds.

3.5.2.3 Welgedacht WWTW

The Welgedacht works is situated in Springs and falls within the DD5 drainage district. The original design capacity of the plant was 85 Mℓ/d. Module 2 have been commissioned and is currently undergoing defects liability period. The plant capacity has been up-graded to 95 Mℓ/d. Plans are currently underway to upgrade the plant to 327 Mℓ/d in order to enhance the treatment capacity. These upgrades will ensure that future developments flows are accommodated thereby meeting the required standards as stipulated by the department of water and sanitation (DWS).

PLANNED PROJECTS		BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
1	New 50 Mℓ/d Module 3 - Extension	R 667 734 532.80	The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 327 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth. Pending availability of funds, the **R667 734 532.80** budget required will accommodate 50 Mℓ/d of 327 Mℓ/d	The implementation/commissioning of the project is subject to the availability of funds.

3.5.2.4 Herbert Bickley WWTW

The Herbert Bickley works is situated south of Nigel town and falls within the DD5 drainage district. The original design capacity of the plant was18.75 Mℓ/d. The plant capacity has been downgraded to 15.1 Mℓ/d. Plans are currently underway to upgrade the plant to 53 Mℓ/d in order to enhance the treatment capacity.

	PLANNED PROJECTS	BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
1	10 Mℓ/d Plant Upgrade	R 133 546 906.60	The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which	The implementation/commissioning of the project is

	PLANNED PROJECTS	BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
			computes to 53 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth. Pending availability of funds, the **R 133 546 906.60** budget required will accommodate 10 Mℓ/d of 53 Mℓ/	subject to the availability of funds.

3.5.2.5 Waterval WWTW

The Waterval wastewater care works is the largest works operated by ERWAT and is situated in the DD6 area at the Kliprivier. The original design capacity of the Waterval wastewater care works was155 Mℓ/d. The plant capacity has been up-graded to 170 Mℓ/d. The primary treatment-debottlenecking project is currently at the design phase to increase the capacity of module 2 and 3, from 40 Mℓ/d to 60 Mℓ/d per module. Plans are currently underway to retrofit the capacity of module 4 from 50 Mℓ/d to 84 Mℓ/d and add an additional 100 Mℓ/d module 5. Below is the summary of these planned and running projects that have been identified to address planned Mega Catalytic Projects.

PLANNED PROJECTS		BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
1	New 100 Mℓ/d Module 5 - Extension	R 1 333 549 066.00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 584 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth. Pending availability of funds, the **R 1 333 549 066.00** budget required will accommodate 100 Mℓ/d of 584 Mℓ/d by 2027/2028.	The implementation/ commissioning of the project is subject to the availability of funds.
2	Module 2 and 3 Capacity Upgrade by debottlenecking the primary treatment.	R 20 000 000.00	The primary treatment-debottlenecking project is currently at the design phase to increase the capacity of module 2 and 3, from 40 Mℓ/d to 60 Mℓ/d per module. The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 584 Mℓ/d by year 2068. The 50-year flow projection is based on	The implementation/ commissioning of the project is subject to the availability of funds.

PLANNED PROJECTS		BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
			the CoE IDP population growth. Pending availability of funds, the **R 20 000 000.00** budget required will accommodate 40 Mℓ/d of 584 Mℓ/d	
3	Technology Capacity Upgrade 50 Mℓ/d (Module 4)	R 247 975 609.80	Designs planned to commence for 2020/2021. The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 584 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth. Pending availability of funds, the **R 247 975 609.80** budget required will accommodate 50 Mℓ/d of 584 Mℓ/d for design-built.	The implementation/ commissioning of the project is subject to the availability of funds.
Total Budget Required				**R3 105 146 115,20**

3. Financial Report

Table 5: Operational expenditure

REVENUE BY SOURCE	BUDGET ANNUAL R	BUDGET FOR 9 MONTHS MARCH 2022 R	ACTUAL YEAR TO DATE MARCH 2022 R	VARIANCE YTD ACTUAL VS YTD BUDGET R	VARIANCE % YTD BUDGET VS YTD ACTUAL %
REVENUE					
User Charges	**1 142 878 261**	**857 158 696**	**857 158 696**	**0**	**0%**
Commercial business - Total	**32 000 000**	**24 000 000**	**27 847 890**	**3 847 890**	**16%**
- Government	14 595 600	10 946 700	12 806 618	1 859 918	17%
- Projects	10 004 400	7 503 300	8 600 534	1 097 234	15%
- Beneficiation	7 400 000	5 550 000	5 278 536	(271 464)	-5%
- Interventions	-	-	1 162 202	1 162 202	100%
Other Income	**28 117 760**	**21 088 320**	**36 621 624**	**15 533 304**	***74%***
Grants received (Government grants & subsidies)	**167 100 000**	**133 680 000**	**45 566 409**	**(88 113 591)**	**-66%**
OPERATING REVENUE GENERATED	**1 370 096 021**	**1 035 927 016**	**967 194 618**	**(68 732 398)**	**-7%**

EXPENDITURE BY SOURCE	BUDGET ANNUAL	BUDGET FOR 9 MONTHS MARCH 2022	ACTUAL YEAR TO DATE MARCH 2022	VARIANCE YTD ACTUAL VS YTD BUDGET	VARIANCE % YTD BUDGET VS YTD ACTUAL
Employee Related Costs - Salaries & Wages	**448 637 209**	336 477 907	**305 109 638**	**(31 368 269)**	**-9%**
Remuneration of Directors	**3 960 262**	2 970 197	**686 256**	**(2 283 941)**	**-77%**
Bad Debts (Provision for Bad Debts)	**1 742 850**	1 307 138	**1 641 405**	**334 268**	**26%**
Depreciation	**100 968 000**	75 726 000	**75 794 889**	**68 889**	**0%**
Repairs and Maintenance	**119 901 125**	89 925 844	**45 459 671**	**(44 466 173)**	**-49%**
Interest Expense	**41 252 448**	30 939 336	**18 511 460**	**(12 427 876)**	**-40%**
Intervention Expenses	**-**	-	**-**	**-**	**0%**
Bulk purchases	**321 893 750**	241 420 313	**184 600 217**	**(56 820 096)**	**-24%**
General Expenses - Other	**164 640 377**	123 480 283	**85 056 647**	**(38 423 636)**	**-31%**
TOTAL OPERATING EXPENDITURE	**1 202 996 021**	**902 247 016**	**716 860 183**	**(185 386 833)**	**-21%**
OPERATING SURPLUS/(DEFICIT)	**167 100 000**	**133 680 000**	**250 334 435**	**116 654 435**	**87%**

Revenue
ERWAT has a 7% under-recovery on its total revenue budget due to the following reasons:

a) Commercial business revenue targets not met due to the fact that the target/budget was set above the current contracts ERWAT has (over-budgeted). The budget was subsequently adjusted downwards during the adjustment budget process.

b) USDG grant income not invoiced in line with the under-expenditure in CAPEX. The under-expenditure is due to delays in shipment of materials due to the effects of COVID, late payment of USDG invoices by the CoE as well as expired contracts identified as a result of prior insufficient CAPEX funds to fund projects.

Expenditure:

ERWAT has a 21% under-expenditure on its total OPEX due to the following reasons:

a) A 9% under-expenditure on employee costs due to delayed recruitment plan as per the new structure. The delay was predominantly caused by a moratorium placed on recruitment by the Board of directors, as well as the lack of a board to appoint the advertised HoD positions. The recruitment plan is back on track and the HoD positions are due to be advertised.

b) A 77% under-expenditure in directors' remuneration due to the fact that the term of the board ended during the second quarter and ERWAT had been without a board. The number of directors also decreased from 8 to 5 in prior years. The board is now approved and expenditure should be in line with the budgets in the coming years;

c) A 49% under-expenditure in Repairs and Maintenance due to the fact that the capturing occurs one month in arrears. The expenditure should normalise towards the end of the year in line with the budget.

d) A 40% saving in interest expense due to lower interest rates;

e) A 24% under-expenditure in bulk purchases due to the fact that the capturing occurs one month in arrears. The July 2021 invoices captured were only R1.2m due to this. The expenditure should normalise in accordance with the budget by July 2022.

f) A 31% under-expenditure in general expenditure mainly as a result of budget for the PPP program with the DBSA that has been delayed pending council approval. Further COVID-related savings were experienced as employees were predominantly working from home. Savings arose from expenditure such as training, consulting fees, travel and accommodation, printing, consumables, consulting fees etc.

Table 6: Capital expenditure

CODE	DEPARTMENT NAME	Capital Budget (2021/22)	Adjusted Actual spend for 2021/2022	Percentage spent of actual budget YTD
				%
73106460020TCXBAZZER	MANAGING DIRECTOR	810 000.00	-	0.00%
73146460020TCXBAZZER	ICT	6 000 000.00	226 344.53	3.77%
73436456020FAXBCZZER	SCIENTIFIC SERVICES	15 953 849.00	1 197 664.04	7.51%
73526449420TCXBHZZER	ESTHER PARK	260 373.00	181 562.50	69.73%
73536449420TCXBHZZER	OLIFANTSFONTEIN	48 723 438.00	7 476 482.43	15.34%
73546449420TCXBHZZER	HARTEBEESTFONTEIN	6 119 826.00	6 001 786.50	98.07%
73616449420TCXBHZZER	ANCOR	4 531 690.00	2 522 629.69	55.67%
73616456020TCXBCZZER	ANCOR	225 000.00	-	0.00%
73626449420TCXBHZZER	BENONI	814 174.00	350 883.91	43.10%
73636449420TCXBHZZER	C GRUNDLING	3 123 357.00	1 001 553.84	32.07%
73646449420TCXBHZZER	HEIDELBERG	3 530 274.00	549 683.05	15.57%
73646460020TCXBAZZER	HEIDELBERG		12 336.00	0.00%
73656449420TCXBHZZER	H BICKLEY	4 777 786.00	2 004 126.66	41.95%
73666449420TCXBHZZER	JAN SMUTS	3 072 521.00	621 941.77	20.24%
73666456020TCXBCZZER	JAN SMUTS	500 000.00	-	0.00%
73676449420TCXBHZZER	J P MARAIS	1 563 910.00	74 841.37	4.79%
73676460020TCXBAZZER	J P MARAIS		6 762.68	0.00%
73686449420TCXBHZZER	DAVEYTON	2 409 996.00	652 946.55	27.09%
73696449420TCXBHZZER	RYNFIELD	5 077 490.00	3 493 179.37	68.80%
73706449420TCXBHZZER	RATANDA	1 646 638.00	-	0.00%
73706460020TCXBAZZER	RATANDA		635 978.08	0.00%
73706456020TCXBCZZER	RATANDA	1 152 174.00	2 013.60	0.17%
73716449420TCXBHZZER	TSAKANE	2 004 898.00	0.05	0.00%
73716449421TCXBHZZER	TSAKANE	229 553.00	-	0.00%
73716456020TCXBCZZER	TSAKANE	-	-	0.00%
73726449420TCXBHZZER	WELGEDACHT	7 561 962.00	2 771 840.43	36.66%
73726456020TCXBCZZER	WELGEDACHT	225 000.00	-	0.00%
73726460020TCXBAZZER	WELGEDACHT		11 597.60	0.00%
73816449420TCXBHZZER	DEKEMA	3 296 317.00	731 099.41	22.18%
73826449420TCXBHZZER	RONDEBULT	241 370.00	-	0.00%
73826456020TCXBCZZER	RONDEBULT	4 889 632.00	1 801 950.00	36.85%
73836449420TCXBHZZER	VLAKPLAATS	34 639 447.00	28 483 326.30	82.23%
73846449420TCXBHZZER	WATERVAL	3 529 325.00	6 540 498.79	185.32%
73846473520TCXBKZZER	WATERVAL	190 000.00	-	0.00%
TOTAL CAPITAL EXPENDITURE CAPTURED ON SOLAR		167 100 000.00	67 353 029.15	40.31%

ERWAT has currently spent R 67 353 030 .66 (40.31%) of its capital budget at the end of the second quarter. The planned SDBIP target for the quarter has not been achieved with a 39.69% negative variance. Amongst others, below are the reasons for the poor performance in expenditure.

a) Unavailability of funds to reimburse Suppliers/Contractors on time, this has resulted in delays in completion/ achieving targets of the projects on time
b) Delays due steel strike action.
c) Cancellation of contracts (contracts went beyond 36 months).

Acceleration Plan:

The SDBIP target for the quarter has not been achieved with a 44.92% negative variance, however ERWAT is putting measures in place to mitigate the challenges stated above.

ERWAT has completed all procurements of contractors for the allocated budget and will revise all cashflows to ensure acceleration of all the ongoing projects. Furthermore, ERWAT will engage with the city to speed up the backlog of unpaid invoices

Table 6: Capital expenditure

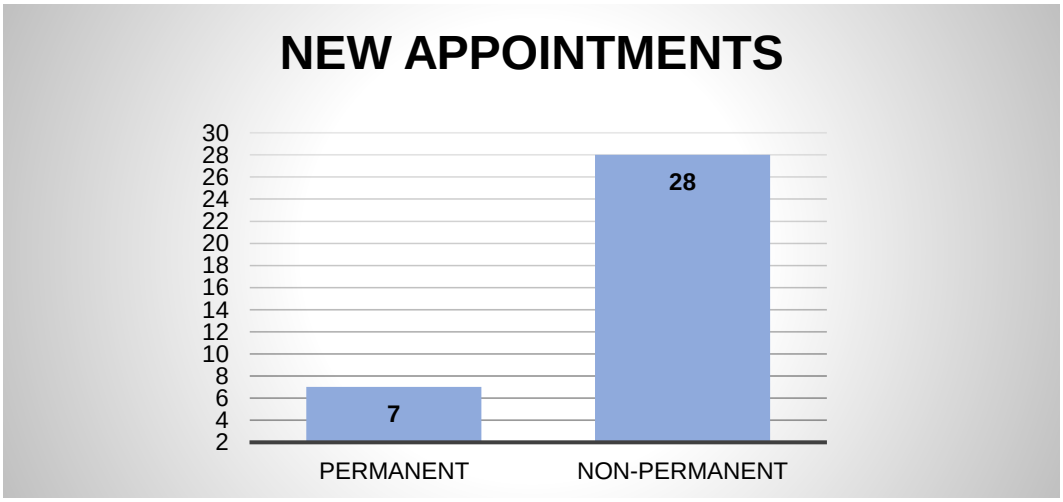
Project Detail	Total Original Budget	Total Revised Budget (applicable only after Adjustment)	Budget for Quarter	Actual for Quarter	Variance	Total Budget for the year	Actual for FY (Yr to date)	Variance for year (Yr to date)	% Completion
CAPITAL PROJECTS	R167, 000, 000.00	N/A	R 33,420,000.00	R 37 784 129.69	R 4,364,129.69	R167, 000, 000.00	R 67 568 900.97	-R 66,326,969.34	40.31%

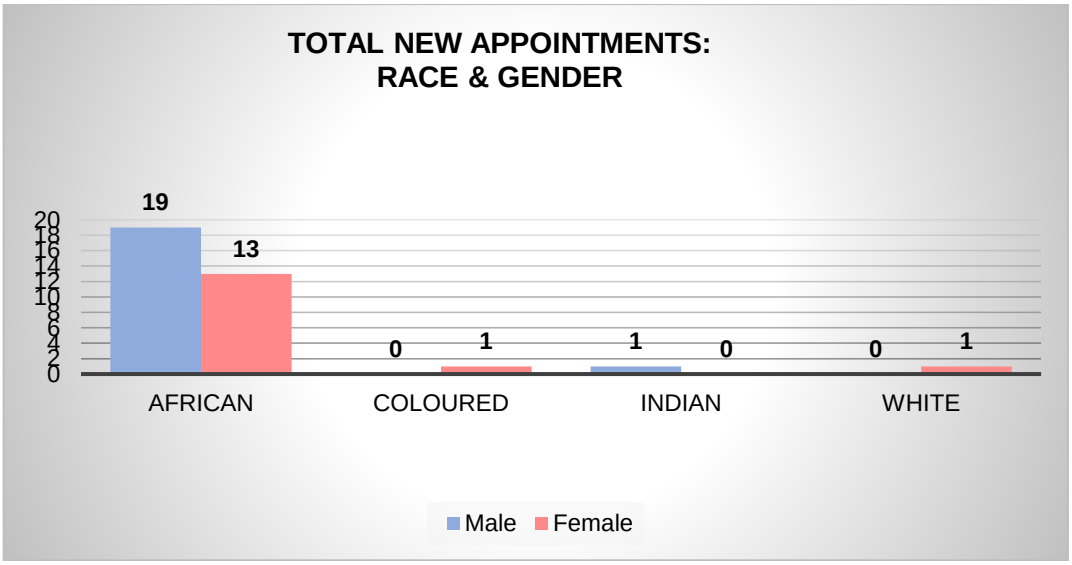
4. Human Resources

4.1 Staff Movements

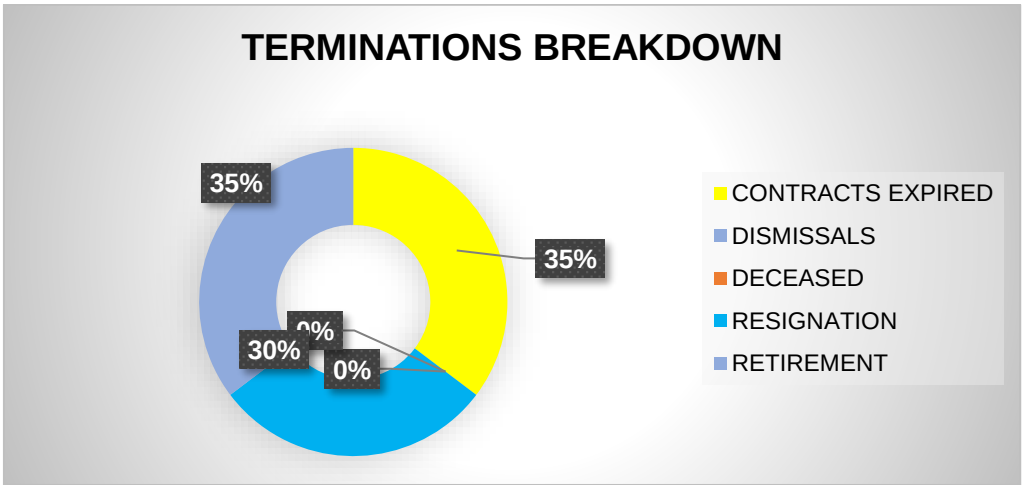
Staff Movements	African		Coloured		Indian		Whites		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
Recruitments	19	13	0	1	1	0	0	1	35
Resignations	3	2	0	0	0	0	0	0	5
Retirements	3	0	0	0	0	0	2	1	6
Contract Expired	3	3	0	0	0	0	0	0	6
Dismissals	0	0	0	0	0	0	0	0	1
Deceased	0	0	0	0	0	0	0	0	0
Promotions	0	0	0	0	0	0	0	0	0

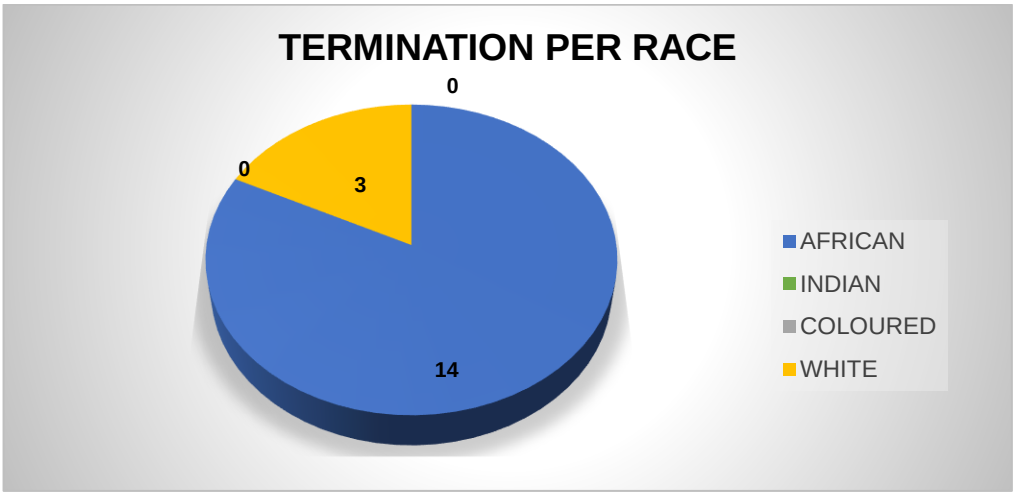
4.1.1 Appointments





4.1.2 Terminations





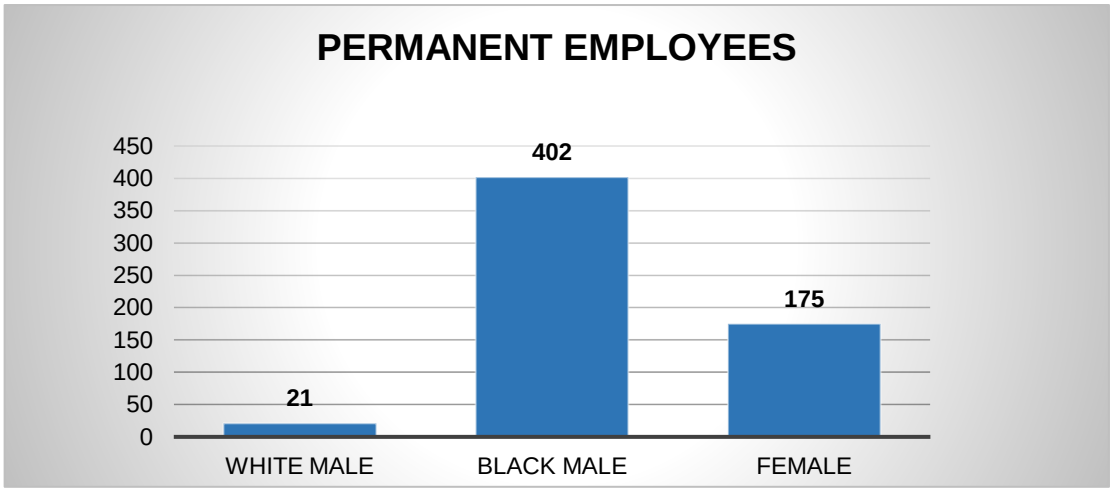
Status Analysis

1. During the period under review, 35 employees were appointed.
2. During the period under review, 17 employees exited the organisation for the following reasons;

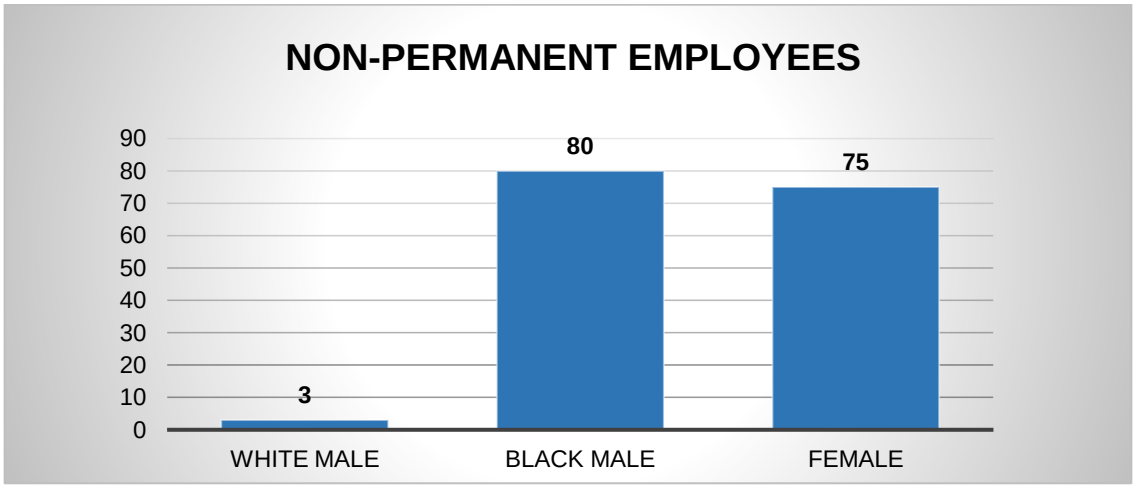
a) 6 contracts expired;
b) 5 employees resigned; and
c) 6 employees went on retirement

There were no deaths nor dismissals during the period under review

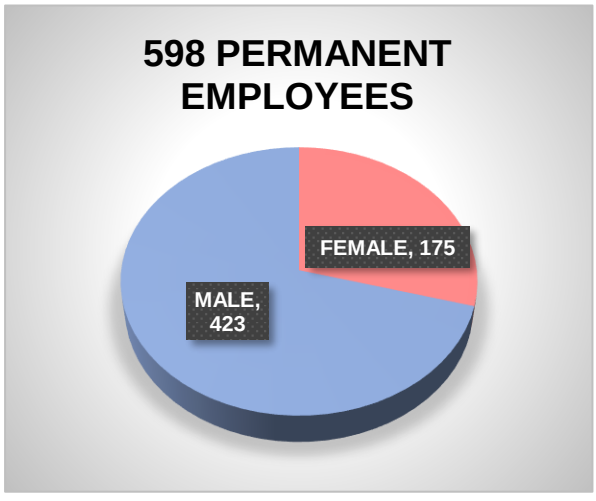
4.2 Employment Equity Demographics

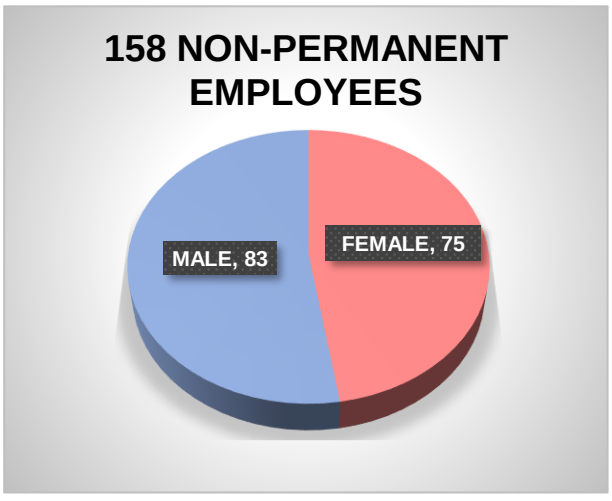


ERWAT has **598** permanent employees.



ERWAT has **158** non-permanent employees.





Status Analysis

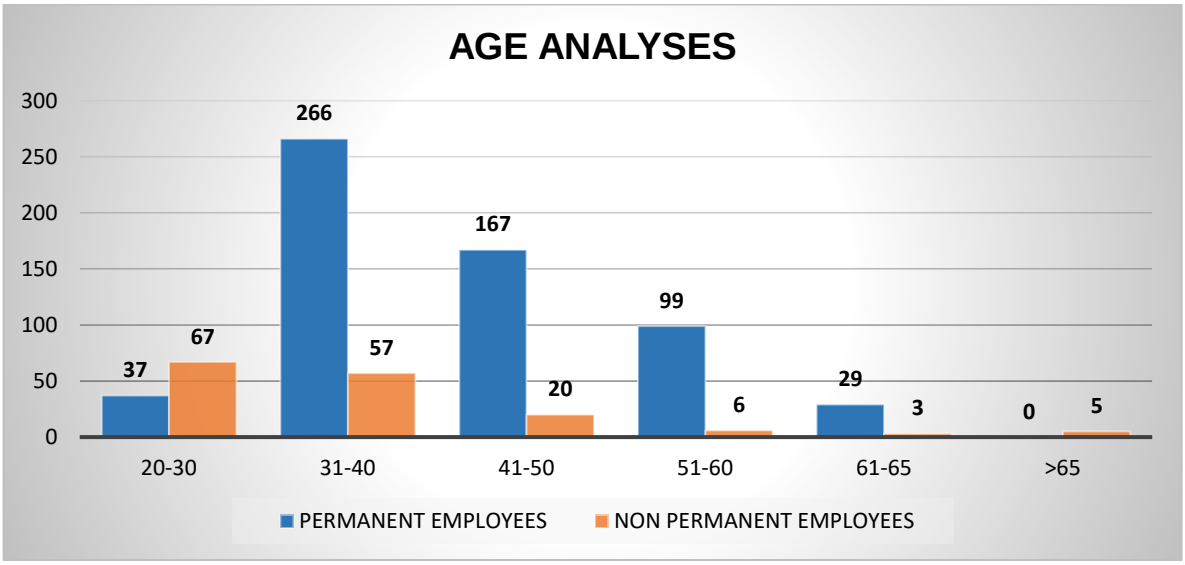
1. The employment demographics of ERWAT as at 31st March 2022 reflects:

    a) Females in both permanent and non-permanent positions within ERWAT account for 250 or 33% of total positions filled.
    b) Males in both permanent and non-permanent positions within ERWAT account for 506 or 67% of total positions filled.

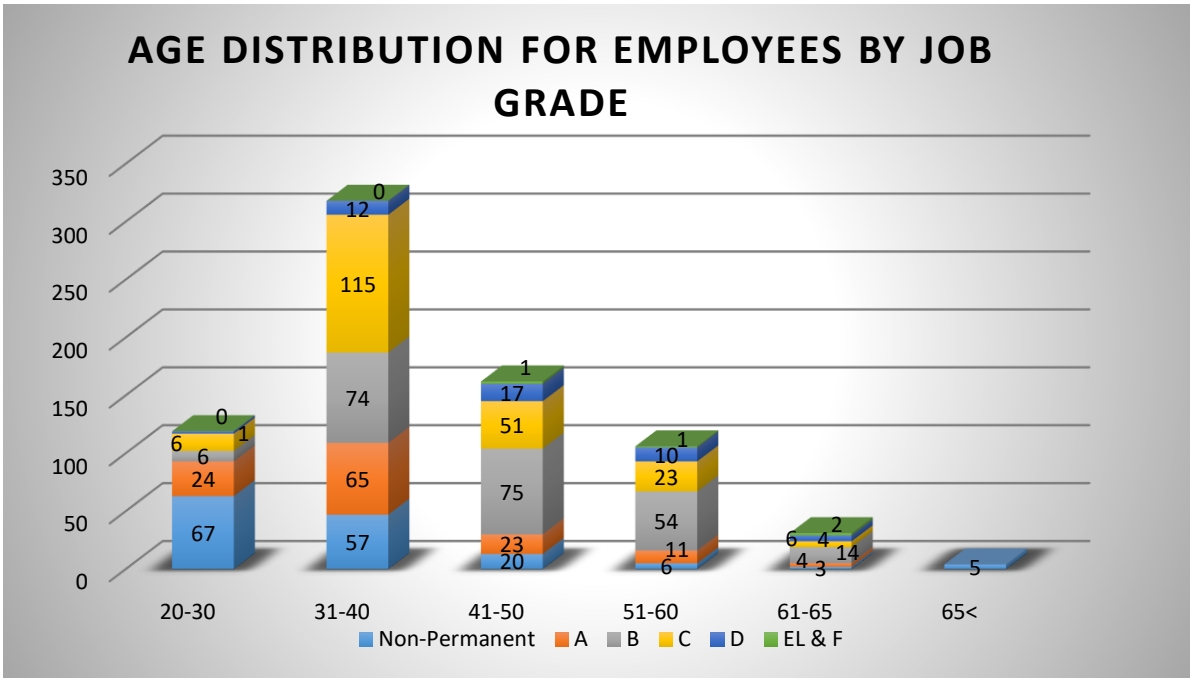
Employment Equipment Update

1. ERWAT's Employment Equity (EE) Committee updated ERWAT's EE plan on the 20th September 2021 according to the Department of Labour's Inspector recommendation in order to align the plan with the changes that took place during the period of the pandemic.

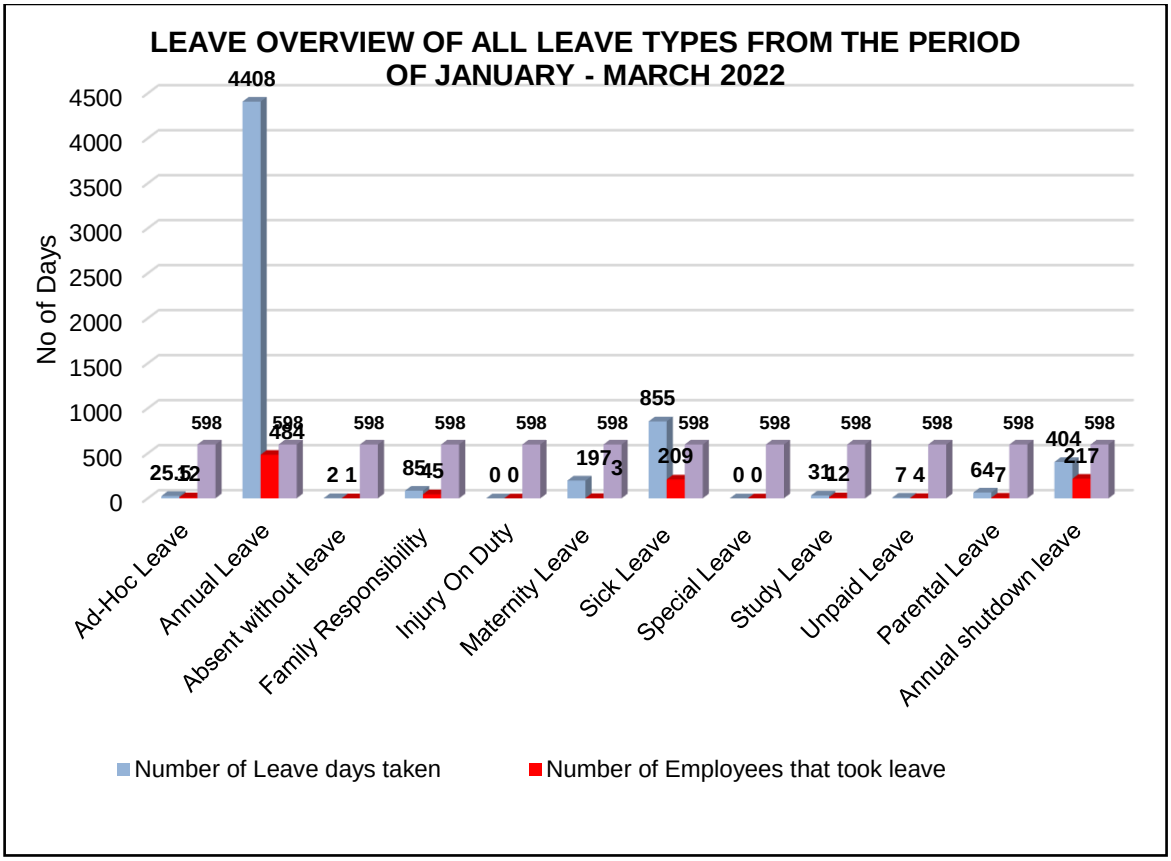
4.3 Age Analysis

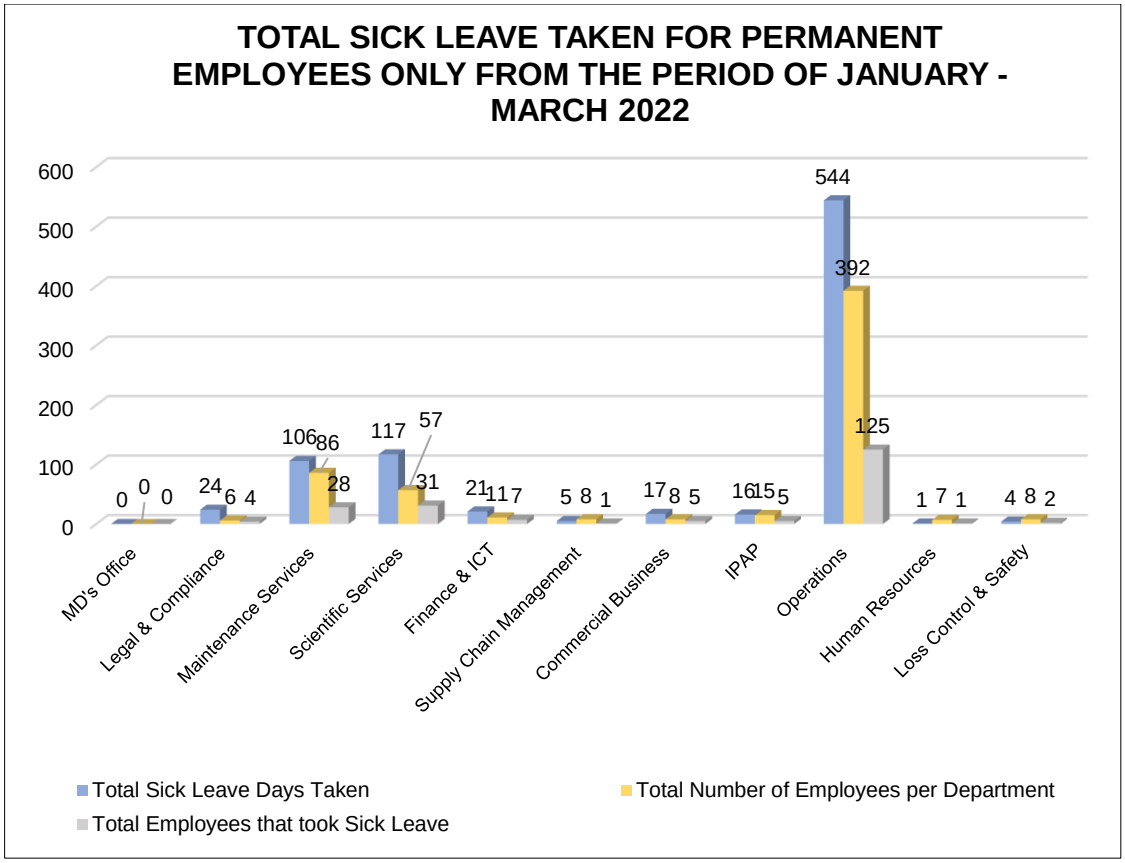


- Average age as at 03/2022 = 31



4.4 Leave Management





Status Analysis

1. Total number of employees who took sick leave during the period under review are 209. The total sick leave taken equates to a minimum of 4.1 days per employees.

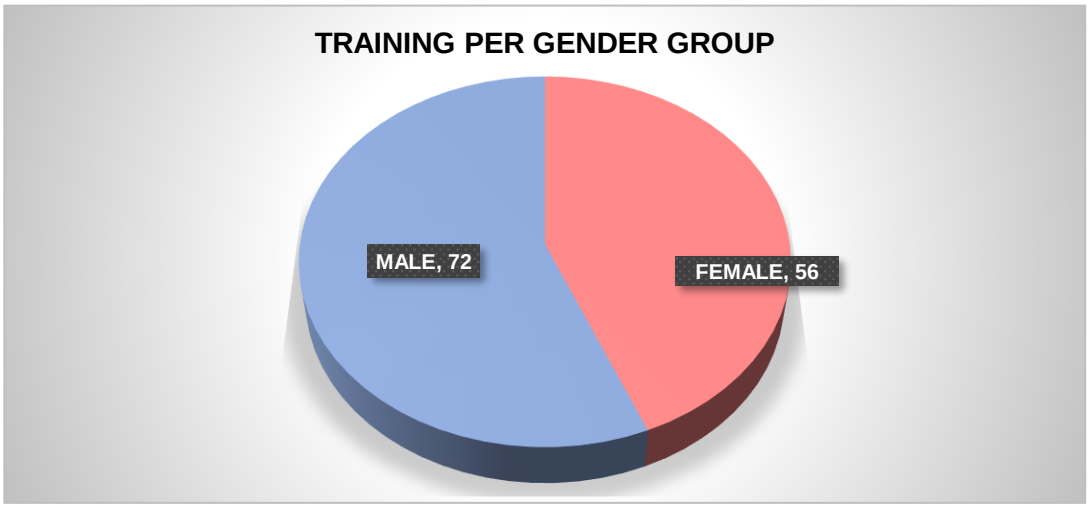
4.5 Overtime Trends

	Quarter 1	Quarter 2	Quarter 3
Total Hours	60 053.50	55 827.65	56 719.25
Total Cost	9 108 626.19	8 390 374.77	8 418 898.24
Budget	9 165 858.75	9 165 858.75	9 165 858.75

1. Overtime is monitored and approved by management, as per the needs of the various business units.

4.6 Training and Development

The reporting period saw **128 employees** attending various training interventions



a) Method Validation Course completed by 10 delegates on the 1st of February 2022
b) Root Cause Analysis completed by 10 delegates on the 2nd of February 2022
c) ISO Auditing completed by 10 delegates on the 3rd of February 2022
d) Measurement of Uncertainty by 10 delegates on the 4th of February 2022
e) Minute Taking by 20 delegates on the 4th of February 2022
f) BBBEE Workshop by 15 delegates on the 4th of February 2022
g) 3 External Bursary Candidates were recruited and started at Universities on 1 March 2022 in the fields of Electrical Engineering, Analytical Chemistry and Water Care.
h) 40 delegates enrolled for Learnership SAQA ID 58951: National Certificate in Water and Wastewater Treatment Process Operations: 136 Credits on Level 2, start date on the 28th of March 2022
i) 10 unemployed learners enrolled for Learnership SAQA ID 61709: FET Training Certificate in Water and Wastewater Treatment Process Control Supervision: 166 Credits on Level 4, start date on the 28th of March 2022

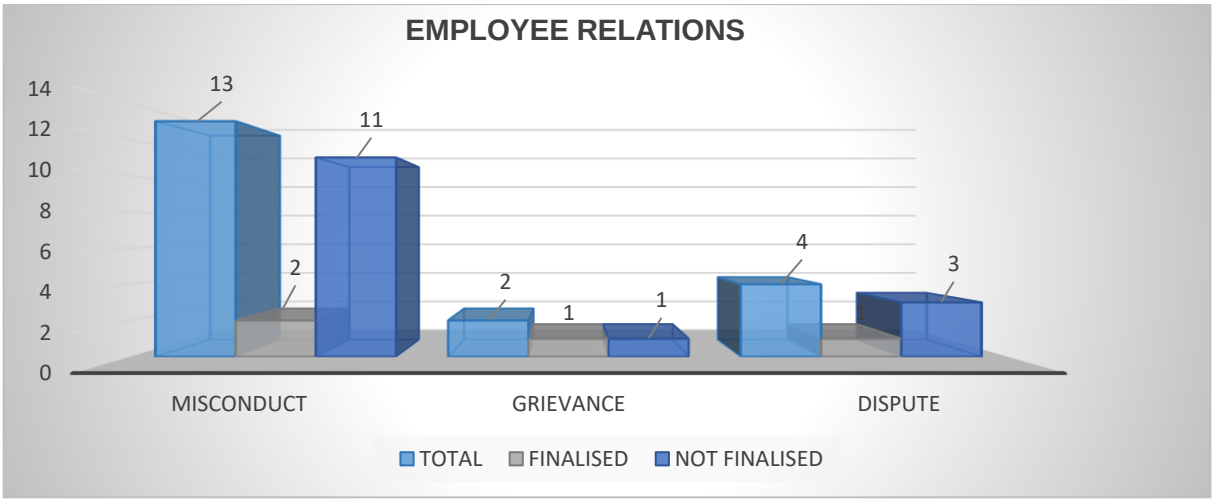
4.7 Performance Management

Status Analysis

Quarter 2 (mid-year) evaluations were conducted for all employees (permanent and non - permanent) during Quarter 3.

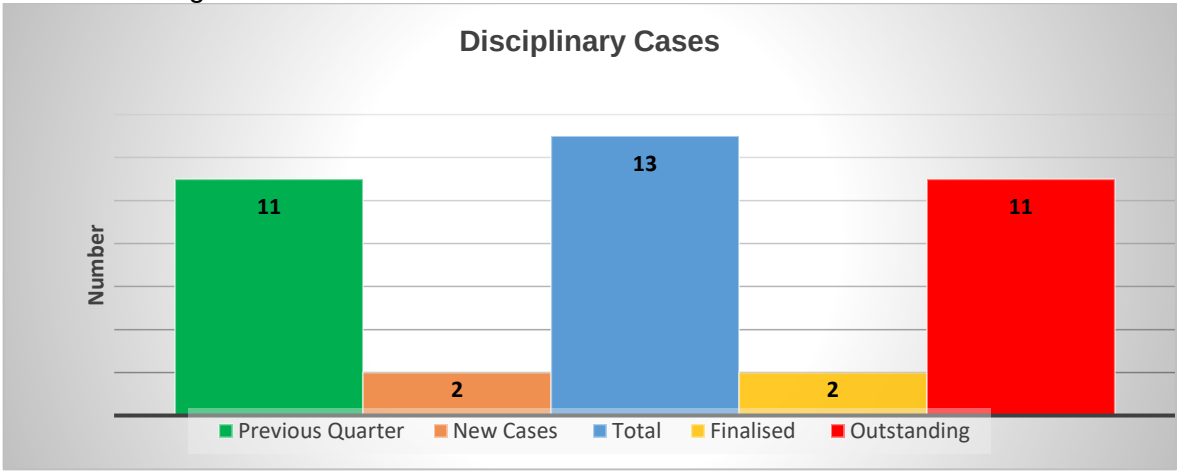
4.8 Employee Relations

The HR department, has received, recorded and administered the following processes for the reporting quarter, below is the statistical data of all cases and the analysis thereof.



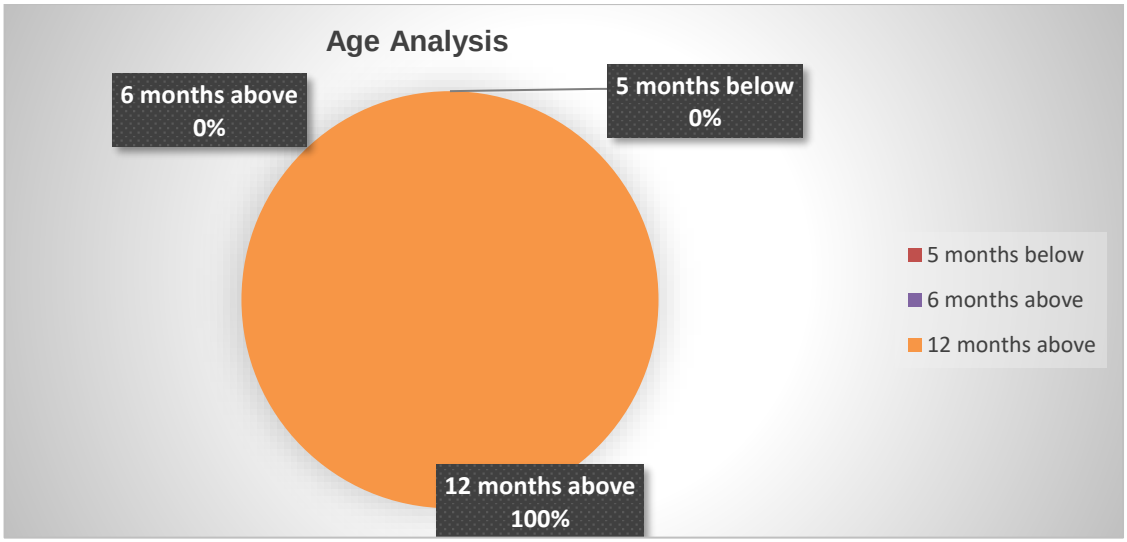
4.8.1. Disciplinary Cases

a) Eleven (11) cases were not concluded in the previous quarter hence brought forward.
b) Two new cases were received; the total for all disciplinary cases is thirteen (13). Total cases finalized is two (2) with a remaining balance of eleven (11) cases outstanding.



4.8.2. Age Analysis of Disciplinary cases

a) The age analysis of the eleven (11) cases outstanding, 0% are below five (5) months, 0% above six (6) months and 100% are above twelve (12) months old.

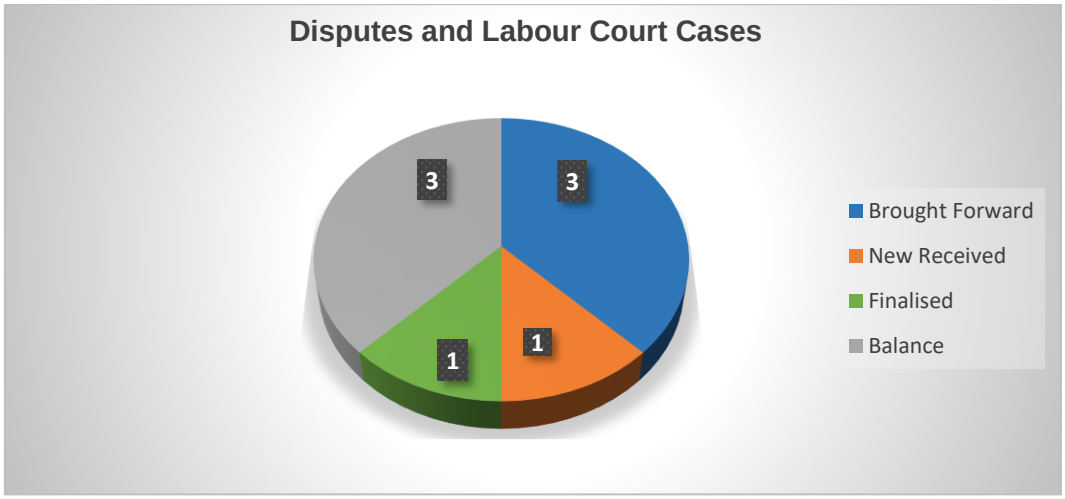


The age analysis of the eleven (11) outstanding cases is as follows:

a) Cases that are three (3) months old =0
b) Cases that are more than twelve (12) months old=11

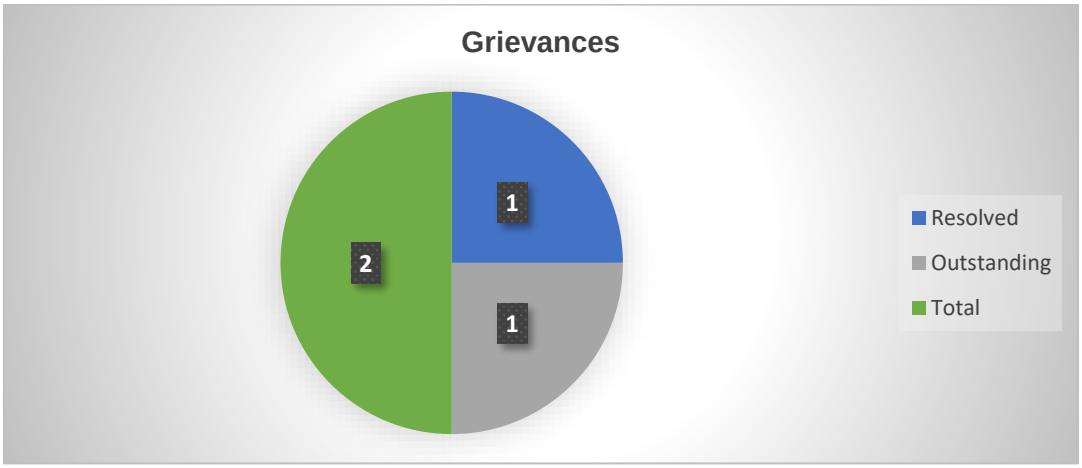
4.8.3. Disputes, Arbitrations & Labour Court Cases

a) Total cases brought forward three (3) as at end of previous quarter.
b) One new case was received
c) One case has been finalised
d) In respect of disputes at the bargaining Council and Labour Court cases, ERWAT is sitting at three (3) cases
e) The above cases are pending adjudication at the appropriate forums.



The graph illustrates the statistical data of disputes at the Bargaining Council and Labour Court, as at the end of Q3, with three (3) cases still pending.

4.8.4. Grievances



Total grievances outstanding are one (1).

4.8.5. Suspensions

There is only one suspensions for the period under review.

4.9 Employee Wellness Programme & OHS

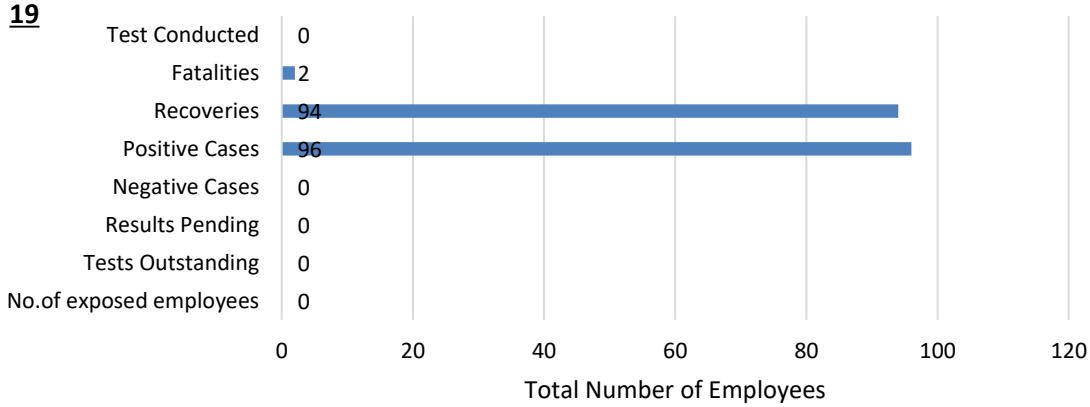
ERWAT Occupational Health Services offers Wellness Programme as follows:

a) ERWAT has 47 Wellness Champions (WC) that are placed on all 19 Plants including the Laboratory and Head Office. During the period under review, no workshops were conducted, due to the COVID-19 pandemic.
b) The core function of the WC is to assist the Occupational Health Nurse, in identifying any health and wellness concerns amongst employees, monitor absenteeism; they also provide health education in a form of frequently scheduled meetings with employees on site.
c) During the period under review 8 employees received Psychotherapy counselling sessions offered by ERWAT Occupational Health Services

4.9.1 COVID-19 Statistics

The statistics below are Consolidated COVID -19 stats reported for the period ending the 31/03/2022

Figure: 19



4.10 Percentage of Salary to OPEX.

	Quarter 1	Quarter 2	Quarter 3	YTD - Actual
Total Manpower Cost	94,480,974.00	99,603,219.00	111,711,701.00	305,795,894.00
Total Operational Expenditure	219,392,910.00	249,613,687.00	247,853,586.04	716,860,183.04
% of Salary to OPEX	**43%**	**40%**	**45%**	**43%**

5. Procurement Practices, Job Creation and Mainstreaming

BEE and GEYODI spend in respect of supplier and contractor (PDIs)

	QUARTER 3				
CATEGORY	**JANUARY**	**FEBRUARY**	**MARCH**	**YEAR TO DATE TOTAL**	**% OF YEAR TO DATE TOTAL**
0% HDI / JURISTIC PERSON	-	1 356 772.60	-	1 356 772.60	6%
1-50% HDI	-	-	-	-	0%
51-99% HDI	-	-	-	-	0%
100% HDI	23 151 886.25		-	23 151 886.25	94%
TOTAL	**23 151 886.25**	**1 356 772.60**	**-**	**24 508 658.85**	**100%**
SIZE OF COMPANY	**JANUARY**	**FEBRUARY**	**MARCH**		
LARGE	-		-	-	0%
MEDIUM	-	1 356 772.60	-	1 356 772.60	6%
SMALL	23 151 886.25	-	-	23 151 886.25	94%
MICRO	-	-	-	-	0%
TOTAL	**23 151 886.25**	**1 356 772.60**	**-**	**24 508 658.85**	**100%**
AWARDS MADE TO:	**JANUARY**	**FEBRUARY**	**MARCH**		
FEMALES	-	1 356 772.60	-	1 356 772.60	6%
BLACK FEMALE 30-100%	22 052 745.00	-	-	22 052 745.00	90%
HDI 50-100%	1 099 141.25	-	-	1 099 141.25	4%
100% HDI	-	-	-	-	0%
MILITARY VETERANS	-	-	-	-	0%
PWD	-	-	-	-	0%
YOUTH	-	-	-	-	0%
TOTAL	**23 151 886.25**	**1 356 772.60**		**24 508 658.85**	**100%**
BBEEE SCORE CARD	**JANUARY**	**FEBRUARY**	**MARCH**		
EME	-	1 356 772.60	-	1 356 772.60	6%
QSE	23 151 886.25	-	-	23 151 886.25	94%
GENERIC	-	-	-	-	0%
TOTAL	**23 151 886.25**	**1 356 772.60**	**-**	**24 508 658.85**	**100%**
AWARD MADE TO	**JANUARY**	**FEBRUARY**	**MARCH**		
EMM BASED COMPANIES	23 151 886.25	1 356 772.60	-	24 508 658.85	100%
NON-EMM BASED	-	-	-	-	0%
	23 151 886.25	**1 356 772.60**	**-**	**24 508 658.85**	**100%**

6. Risk Management

SUMMARY OF RISKS

The Board of Directors has committed to the process of risk management in the Board Charter which states that the board appreciates that strategy, risk, performance and sustainability are inseparable and give effect to this by satisfying itself that all material risks in the strategy and business plans have been duly considered and addressed by management. Risk Management has become an integral part of strategy setting. Risk Management forma part of senior management's Key Performance Areas

ERW1. Lack of integrated planning between the City and the Entity
Integrated planning is crucial to the success of any mega-project. ERWAT plays a critical role in the growth of the City and the Aerotropolis plans. The integrated planning for the advancement of the City need to be done by the City and the Entity working together

ERW2. Inadequate Capacity to treat wastewater
Ekurhuleni is fast becoming a city that is growing at a rapid pace, placing a high burden on infrastructure capacity. The current status quo: The Infrastructure is old and operating above their design capacity, resulting in frequent breakdown of critical equipment

ERW3. Inadequate Cash flow to meet business requirements
ERWAT derive a substantial portion of its revenue from CoE (user charges, grants funding etc.), the potential delays in the payment from COE to ERWAT has a detrimental impact in the entity's ability to settle its short term obligations as they become due.

ERW4. Inadequate/limited revenue generation to supplement the approved budget
ERWAT receives its operational and capital budget from the City of Ekurhuleni. The entity strives to augment its total budget by generating additional income through the commercial business department. There is a growing number of private companies offering the same services as ERWAT thus making the water sector highly competitive

ERW5. Inability to achieve Capital Expenditure set target
There is a growing trend within the country of project disruptions by communities and business demanding a stake in the project. These can include other factors such as unavailability of material and unfavourable weather conditions at construction sites.

ERW6. Inadequate preparedness in the event of an emergency/disaster.
The waster care works are both hydraulically and organically overloaded threatening the growth of the City and the environment. Wastewater care works that operate above their design capacity pose a huge risk to the City of Ekurhuleni and has a potential to slow down growth and development of the City. Some of the Wastewater care works were built many years ago without considering the need for water flow diversion system. Some wastewater care works does not have emergency dams.

ERW7. Potential loss of key skills
ERWAT recognises there is a growing demand of skilled personnel in the water sector (Ref: Scarce Skills 2019, Vol 6). The loss of key skills within the organisation remains a threat that can impact negatively on the organisational objectives. Some of the employees may succumb to the pandemic

ERW8. Potential delay in supply and delivery of critical goods/services
The entity import some of the equipment and consumables that is critical in testing water for the City, the entity and customers. There are long lead time in the global supply chain due to the pandemic and restrictions by various countries.

ERW9. Potential loss of the ISO 17025 Accreditation
Aging laboratory equipment is a threat to losing the ISO certification gives the general public and customers an assurance that ERWAT applies best practice in while testing the water, it is a requirement for both the Blue drop and Green drop standards.

ERW10. Potential Loss of, and Unauthorised Access Critical Information
The Protection of Personal Information Act places a burden on the entity to safeguard more responsibility to personal information of employees, customers and other stakeholders.

ERW11. Potential injuries to personnel, visitors and contractors
The Entity takes pride in its Safety programme. Efforts are made to ensure that the employees, contractors and visitors are safe at all times. Accidents however do happen while it is least expected

Strategic Risk Mitigations
Management and the Board ensures that there are adequate risk mitigation plans in place to strengthen the current control environment. Some of the risk mitigations as identified require a huge budget such as the upgrading of infrastructure.

ERWAT Strategic Risks

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
ERW1	Inadequate integrated planning/coordination between ERWAT and City departments. Business Plan may not be aligned with its corporate strategy, resulting in the entity failing to meet of the entity its Key Performance Indicators	CF1	Inadequate communication and coordination between ERWAT and City departments (city planning water waste storm cluster	Service Delivery	CC 1.1	1.Service delivery Agreement	RAP1.1	1. Addendum to the Service Delivery Agreement	ERWAT was operating without a board in place from 1 November 2021 to 28 February 2022. A board meeting is scheduled to take place on the 19th of May 2022.
						2. MMC Senior Management Quarterly Meetings 3.		2. Develop the Terms of Reference for the SDA Coordination Steering Team between ERWAT and the City	The entity will not be developing the Terms of Reference for the SDA Coordinating Committee as this committee is led by C.o.E. The entity will give inputs if one is developed by the city.
						3. Participation of Technical Cluster Meetings		3. Review the E Corporate Governance Framework	Action plan completed in quarter 1.
ERW2	Inadequate Infrastructure to treat wastewater	CF2.1	Outdated, aging and inadequate infrastructure and technology to treat high strength industrial effluent.	Service Delivery And growth of the City	CC 2.1	Development & Engineering Contribution Policy	RAP2.1	Ring-fence Engineering Contributions for plant upgrades	Action plan completed in quarter 1.
								Review the ERWAT Development & Engineering Contribution Policy to align with City Development & Contribution Policy once it's approved	The Entity's Development & Engineering Contribution Policy is in good standing. Alignment is depended on CoE starting their policy review process.

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
					CC 2.2	50-Year Master Plan	RAP2.1.4	Implementation the MTREF 2021-2022 CAPEX plan in line with the 50 year Master Plan Project 1 Olifantsfontein Intervention Upgrades	**Project 1** **Olifansfontein Intervention Upgrades** (Phase 1a & 1b) is scheduled to be partially by the end of October 2021. The full commission will take place end of February 2022. the procurement phase for phase 1c, 1d, and phase 2 is on going. (quarter3 progress was not available at the time of reporting)
					CC 2.3	Wastewater Risk Abatement Plans	RAP2.1.6	Implementation the MTREF 2021-2022 CAPEX plan in line with the 50 year Master Plan	Total Expenditure on CAPEX Planned R133,420,000 Actual expenditure R67,353,030.66 CAPEX Procurement progress

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
									<table><tr><th>NO</th><th>DESCRIPTION</th><th>PROCUREMENT STAGE</th></tr><tr><td>1</td><td>Upgrade - Module 3 Olifantsfontein Phase1C Works</td><td>Advert Stage</td></tr><tr><td>2</td><td>Professional Services Phase 2 : Upgrade and refurbishment of Olifantsfontein</td><td>P.O signed 25.03.22</td></tr><tr><td>3</td><td>Flow and Loads project Vlaakplaats</td><td>Cancelled</td></tr><tr><td>4</td><td>Electrical distribution switchboards, motor control centres System at Various WCW</td><td>ON-GOING</td></tr><tr><td>5</td><td>HVAC System For Scientific Services</td><td>Awaiting PO</td></tr><tr><td>6</td><td>Online & Portable Meters for various WCW</td><td>SLA</td></tr><tr><td>7</td><td>Commissioning of Self Priming and Horizontal end suction pumps</td><td>SLA</td></tr><tr><td>8</td><td>Commissioning of Aerators, Gearboxes & Motor at Rynfiled & Welgedacht</td><td>On-going</td></tr><tr><td>9</td><td>Refurbishment of Old Labolatory Haartebeesfontein</td><td>BEC</td></tr></table>
					CC 2.4	Wastewater Research and Development Program	RAP2.1.9	Organic testing of industrial effluent	The information was not available during the reporting period
					CC 2.5	C.o.E Schedule A Bylaws Analysis of samples by ERWAT	RAP2.1.10	Participation in the Bylaw Committee	Action completed. ERWAT (Operations) participated and gave inputs in the Bylaw revision workshops organised by C.o.E.

<table>
<tr><th>REF</th><th>Risk Title</th><th colspan="2">Contributing Factors</th><th>Impact / Consequences on the ERWAT</th><th></th><th>Current Mitigation Controls</th><th>RAP</th><th>Risk Action Plan</th><th>Action Plan Progress Quarter 3</th></tr>
<tr><td rowspan="4"></td><td rowspan="4"></td><td></td><td></td><td rowspan="3"></td><td>CC 2.6</td><td>Incident management protocol (IMP) .</td><td>RAP2.1.12</td><td>Tracking of incidents and on a quarterly to assist in planning and decision making</td><td>Incidents
<table>
<tr><th>Wastewater Care</th><th>Critical equipment failures QUARTER 3 21/22</th><th>Power Failure (hours) QUARTER 3 21/22</th></tr>
<tr><td>Benoni</td><td>8</td><td>26</td></tr>
<tr><td>Esther park</td><td>1</td><td>49</td></tr>
<tr><td>Hartebeestfontein</td><td>9</td><td>37</td></tr>
<tr><td>Olifantsfontein</td><td>25</td><td>131</td></tr>
<tr><td>Rynfield</td><td>4</td><td>34</td></tr>
<tr><td>Ancor</td><td>15</td><td>54</td></tr>
<tr><td>JP Marais</td><td>6</td><td>23</td></tr>
<tr><td>Jan Smuts</td><td>-</td><td>25</td></tr>
<tr><td>Welgedacht</td><td>61</td><td>13</td></tr>
<tr><td>Daveyton</td><td>9</td><td>107</td></tr>
<tr><td>Heidelberg</td><td>12</td><td>81</td></tr>
<tr><td>Herbert Bickley</td><td>17</td><td>21</td></tr>
<tr><td>Tsakane</td><td>20</td><td>17</td></tr>
<tr><td>Dekema</td><td>05</td><td>109</td></tr>
<tr><td>Vlakplaats</td><td>09</td><td>32</td></tr>
<tr><td>Waterval</td><td>85</td><td>01</td></tr>
</table></td></tr>
<tr><td></td><td>Inadequate budget upgrade infrastructure</td><td></td><td>MTREF Budget</td><td>RAP2.1.13</td><td>Invite Expression of Interest from the various Technology providers</td><td>The tender was a non-award in quarter1. There is no progress reported in quarter 3</td></tr>
<tr><td>CF</td><td>Inadequate implementation of</td><td>CC 2.1.22</td><td>Asset Management Policy</td><td>RAP2.</td><td>No further mitigation was identified</td><td>No action to be implemented for the financial year under review.</td></tr>
</table>

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
		2.2	maintenance plans leading unavailability of equipment				1.13		
					CC 2.1.23	Asset Management Care Plans, limited available budget	RAP2.1.14	Implementation of 2021-2022 Maintenance Plan Preventative Plan Predictive Maintenance Re-active Maintenance	The entity did not achieve the Percentage expenditure on repairs and maintenance budget The planned target was 75% and only 60% was attained. **Reasons** The reasons are attributed to the department not being able to utilise critical asset master contracts on time. There is also a backlog in non-payment of invoices
					CC 2.1.24	Equipment Operating Manuals	RAP2.1.15	No further mitigation was identified	No action to be implemented for the financial year under review.
		CF 2.3	Inadequate budget allocation to maintain infrastructure		CC 2.1.25	Maintenance budget	RAP2.1.16	Implement the 2021-2022 Maintenance Budget	The entity did not achieve the Percentage expenditure on repairs and maintenance budget The planned target was 75% and only 60% was attained.
		CF 2.4	Lack of service contract for critical spares		CC 2.1.26	Service Master Contracts	RAP2.1.17	Establish Service Contracts for critical equipment	Spares Master contract in place to cover all maintenance requirements.
		CF 2.5	Delays in bringing back equipment and services due to ling lead time for			No current control	RAP2.1.18	Investigate the local market for the sourcing of critical equipment	Spares Master contract in place to cover all maintenance requirements.

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
			spares that are sourced overseas						
		CF 2.6	Storm water ingress (be incorporated into the C.o.E register)		CC 2.1.27	No current control	RAP2.1.21	No further action plan identified	No action plan can be implemented by the entity. The remedial action needed can only be implemented by the City
					CC 2.1.28	Asset Management Strategy	RAP2.1.22	No further action plan was identified	No action plan to be implemented by the entity for the financial year under review.
		CF 2.7	Rapid population and industrial growth within C.o.E		CC 2.1.29	50 Year Master Plan 2. Township Development Application	RAP2.1.23	No further action plan was identified	No action plan to be implemented by the entity for the financial year under review.
ERW3	**Inadequate Cash flows to meet business requirements**	CF 3.1	Lack of a consolidated cash-flow forecast based on actual departmental requirements	Compromised service delivery.	CC 3.1	Cash-flow projections are created based on assumptions of monthly expenditure	RAP3.1	Implementation of cash-flow projections taking into account the actual departmental cash-flow requirements	Projection are done on a regular basis based on the estimated expenditure and reported to be reported to the Board. There was no Board meeting in quarter 3.
		CF 3.2	Unforeseen increases to labour costs such as overtime and other elements of payroll costs.	Attrition of skilled work force. Low staff morale.	CC 3.2	Overtime Policy Remuneration Policy Monitoring of actual expenditure against approved budget and	RAP3.2	Embark on a process to slowly build up cash-flow reserves in order to absorb any unforeseen expenditure which may arise.	Action completed.

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
						taking conservative approach to cash flows management			
		CF 3.3	Inadequate budgetary increases granted by the C.o.E and budget cuts due to economic pressures (Historic and Current)		CC 3.3	Budget deficiency Formal Communicating to C.o.E regarding shortfall in the budget allocation	RAP3.3.1	Investigate other sources of funding.(e.g PPP)	The Entity has prepared a report for submission to the Technical Cluster for PPP projects for approval. DBSA is identified as a possible funder. Council approval is needed for further engagement with DBSA
		CF 3.4	Available funds not prioritised in order of its most effective use.		CC 3.4.1	Cost Containment Policy	RAP3.4.1	Development and Implementation of a cost containment strategy	Strategy document is in draft and will be finalised by 30 June 2022 Cost containment is being implemented through various ways, eg reduction in travel and catering, scrapping of petty cash, obtaining term contracts (with Pre-set rates) for regular commodities, tailoring of certain SLA conditions to ensure optimal savings on contracts.
		CF 3.5	Lack of ring-fencing of income streams to service the corresponding expenditure		CC 3.5	Ring-fenced service charges, development contributions, USDG	RAP3.5	Ring-fence income streams	Action completed in quarter 1

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
		CF 3.6	Delayed settlement of invoices raised by ERWAT for payment by the C.o.E in relation to service charges and CAPEX grants		CC 3.6.1	Formal Communication to CoE requesting timeous payment of invoices	RAP3.6.2	Charge interest on long outstanding invoices	There was no interest charged to the City for the late payment of service charges invoices. Process is ongoing and as and when the need arise
ERW4	**Inadequate revenue generation to supplement the approved budget**	CF 4.1	Inability to secure new business due to manpower costs that higher than that of competitors	Compromised service delivery.	CC 4.1	In-service trainee rates in line with the Rates Schedule	RAP3.1	Review of the Pricing Model. Develop a model to determine manpower costs per project	The generic pricing schedule has been developed and is in for consideration internally.
		CF 4.2	Inability to obtain new business due to operational costs of laboratory services that is higher than that of competitors.	Compromised service delivery.	CC 4.2	Reporting Turnaround Time, Lab Accreditation.	RAP3.2	Develop of Sales Strategy	The tender for a Business Plan with Market Penetration Plan was advertised but no award was issued. The scope has been amended to fit in a feasibility study and to be tabled at the Bid Specification Committee in April

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
		CF 4.3	Overall cost of pursuing business (Marketing, overheads, travel etc.)	Compromised service delivery.	CC 4.3	Manually costing per project basis.	RAP3.3	Develop a tool for tracking cost of sales per project or business lead. (Part of RAP 3.2)	Commercial Business is using an Excel Spreadsheet for the tracking of projects. There will be no further action plan to be implemented under the financial year under review.
		CF 4.4	Loss of existing business due to competition in the water sector	Compromised service delivery.	CC 4.4	Quarterly Business reviews	RAP3.4	Implement the recommendations from the Customer Survey outcome	An implementation plan has been developed and tabled at EXCO. The scope of the tender to implement the recommendations is being amended and to be advertised. Employees from the various departments who contribute towards the BBBEE score has been rained.
		CF 4.6	Loss of existing business through insourcing and companies closing down or reducing costs	Low staff morale.	CC 4.5	Customer Satisfaction Survey	RAP3.6	Review of existing clients contract to incorporate a clause that prohibits the clients from employing ERWAT employees (with the purpose of continuing with the same serious that was previously rendered to the client) who were based at the clients.	Action plan not yet started. No progress reported in quarter 3
		CF 4.7	Legislative Limitations/MFMA Section 164 Forbidden Activities.	Unskilled workforce and skills transfer	CC 4.6	No current control	RAP3.7	No further action plan was identified	No action plan to be implemented by the entity for the financial year under review

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
		CF 4.8	Business requirements limiting of entry to new market (Level of BBB-EEE Compliance/Inadequate and/or no BBEE certificate)		CC 4.7	Broad Based Black Empowerment Compliance Reviews	RAP3.8	Annual review of BBB EE Compliance.	Action plan completed in quarter 1
		CF 4.9	Inadequate measures for granting credit and revenue collection		CC 4.8	Credit Collection and Debt Management policy	RAP3.9	Develop Standard Operating Procedure for granting of credit.	ERWAT is currently exploring credit verification mechanisms for incorporation into the Standard Operating Procedure
ERW5	**Possible failure to achieve Capital Expenditure set target**	CF 5.1	Planning, SCM processes and systems not fully integrated online	Service Delivery	CC 5.1	Manual Individual Procurement Plans has been developed and implemented	RAP5.1	No further action plan identified	No action plan to be implemented by the entity for the period under review
		CF 5.2	Continuation of project (roll-over) not provided in the next financial year (vote not created).		CC 5.3	Annual CAPEX Plan with projected cash flows for each project	RAP5.2.1	Prepare projected cashflows in budget tool format per vote number (for multi-year projects & new projects starting in the next budget period) prior to submission of draft	The budget tool is yet to be implemented, however Cash flows are monitored on excel spreadsheet for all running projects

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
								budgets. (February every year)	
		CF 5.4	Delays in Supply Chain Management /bidding processes. (Including the effect of the Pandemic)		CC 5.5.1	Bid Committees appointed with weekly meetings to speed up SCM	RAP5.4.1	Schedule Training on Supply Chain Management	There was no SCM Training schedule in quarter 3
					CC 5.5.2	Bid Committees tracking register implemented.	RAP5.4.2	Develop a Turn Around Policy and procedure/process flow chart	Action plan completed.
		CF 5.5	Late payment of invoices		CC 5.6.1	Creditors Policy	RAP5.5.1	.1. Implementation of finance system a part of ERP, to allow for invoice tracking at departmental level	Invoices are sent to a dedicated staff within finance to speed up payment process. To report in quarter 4
					CC 5.6.3	Capital Expenditure Spending Tracking Tool generated weekly for monitoring and evaluation.	RAP5.5.3	No further action plan identified	No action plan to be implemented by the entity for the period under review
		CF 5.6	Members of the community and the local business forums		CC 5.7.1	Community Liaison Officer Appointed through ward councillors to assist with	RAP5.6.1	Engage CSR office prior to commencement of construction project. (CSR plan to include Projects)	There were no new projects in quarter 3

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
			demanding to be sub-contracted in the project.			community engagement.			
					CC 5.7.2	Sub-contracting to local business on projects that requires non-technical skills.	RAP5.6.2	1. CSR to conduct an analysis on the communities around the ERWAT plants to determine their needs	A tender to conduct CSR Community Impact Analysis is at Bid Evaluation Stage.
		CF5.7	Potential disruptions such as Contractor employees going on strike and/or any other disruption caused by contractor		CC 5.8	No control	RAP5.7	No further action plan identified	No action plan to be implemented by the entity for the period under review
		CF5.8	Denial of contractor's access to ERWAT sites due to labour unrest		CC 5.9	Disciplinary Procedure	RAP5.8	Disciplinary processes to be taken for illegal strikes as and when they arise	There was no illegal strike in quarter 3
		CF5.9	Denial of contractor's access to ERWAT sites due to community unrest		CC 5.10	Business Continuity Management Policy	RAP5.9	CSR to conduct an analysis on the communities around the ERWAT plants to determine their needs	A tender to conduct CSR Community Impact Analysis is at Bid Evaluation Stage.
		CF	Denial of ERWAT			No control		CSR to conduct an analysis on the communities around	A tender to conduct CSR Community Impact Analysis is at Bid Evaluation Stage.

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
		5.10	employees s access to ERWAT sites by the community members					the ERWAT plants to determine their needs	
		CF 5.11	Unexpected withdrawal from projects by the contractor.		CC 5.11	Service Level Agreements for the contractors appointed	RAP5.10	No further action plan identified	No action plan to be implemented by the entity for the period under review
ERW6	**Inadequate preparedness in the event of an emergency/disaster**	CF 6.1	Some plants of the 19 Wastewater Care Works do not have wastewater bypassing systems and emergency dams	Service Delivery	CC 6.1	Water Bypass System for some Wastewater Care Works and emergency dams	RAP6.1.1	No further mitigation identified	No action plan to be implemented by the entity for the period under review
		CF 6.2	Some of the Infrastructure built on dolomitic areas		CC 6.1.2	Geo tech studies conducted (every three years)	RAP6.1.2	Develop a Standard Operating Procedure for Geo-Technical Studies	Action plan not yet started
		CF 6.3	Inadequate Business Continuity		CC 6.1.3	Business Continuity Management Policy	RAP6.1.3	Review Business Continuity Management Strategy	Action plan completed in quarter 1.

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
			Management Program -cont-		CC 6.1.4	Incident Management Protocol (Emergency Response Plan)	RAP6.1.4	Develop a Disaster Recovery Plan for ICT	Action plan completed in quarter 1.
		CF 6.4			CC 6.2.1	Business Continuity Management Risk Assessments for Water Care Works and Support Services	RAP6.1.6	Review of BCM Risk Assessments for all departments	Action plan completed in quarter 1.
					CC 6.2.2	BCM Business Impact Analysis	RAP6.1.7	Review of Business Impact Analysis	Action plan completed in quarter 1
					CC 6.2.3	Critical Supplies Register	RAP6.1.8	Update the Critical Supplies Register	Action plan completed in quarter 2
					CC 6.2.4	Business Recovery Plans	RAP6.1.9	Review of Business Recovery Plan	Action plan completed in quarter 1.
					CC 6.2.5	BCM Steering Committee	RAP6.1.10	BCM Communications and Awareness	Quarter 3 BCM meeting held and the new ways of communications agreed upon. In progress
					C65.2.6	BCM Infrastructure Condition Assessments	RAP6.1.11	No further action plan identified	No action plan to be implemented by the entity for the period under review

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
ERW7	**Potential loss of key skills**	CF7.1	Unexpected loss of lives due to the ravaging impact of the pandemic.		CC7.1.1	Succession Plan Framework for critical departments	RAP7.1.1	No further action plan	No action plan to be implemented by the entity for the period under review
					CC7.1.2	Covid - 19 Policy and Procedures	RAP7.1.2	Review the Covid 19 Standard Operating Procedure and align it to the HR Climate Survey	COVID 19 Standard Operating Procedure reviewed and approved by the Executive Committee
					CC7.1.3	Conduct Covid 19 Risk Assessment	RAP7.1.3	Review the Covid 19 Risk Assessment	Action completed in quarter 1
		CF7.2	Dissatisfaction in the Working Environment (e.g. not fitting in with the organisation's culture and inadequate working resources – PPE etc)		CC7.2.1	Employee Benefits Policies	RAP7.2.1	Medical Aid and Funeral Claim Policy to be merged into a single Employee Benefits Policy	Employee Benefits Policy developed and being merged with Medical Aid benefits. The Claims Policy to remain a stand alone policy
								Develop a Pension Fund Policy to be included in the Employee Benefits Policy	Employee Benefits Policy developed and being merged with Medical Aid benefits. To be tabled at EXCO for recommendation to the Board for approval.
					CC7.2.3	Psychosocial support	RAP7.2.3	Appoint service provider for 36 months for the psychosocial and related services	Service provider appointed to render psychosocial and related services for a period of 36 months. Action plan completed

<table>
<tr><th>REF</th><th>Risk Title</th><th colspan="2">Contributing Factors</th><th>Impact / Consequences on the ERWAT</th><th></th><th>Current Mitigation Controls</th><th>RAP</th><th>Risk Action Plan</th><th>Action Plan Progress Quarter 3</th></tr>
<tr><td></td><td></td><td></td><td></td><td rowspan="8">Service Delivery</td><td>CC 7.2.3</td><td>Management Development Program</td><td>RAP7.2.3</td><td>Appointment of the National School of Government for 36 months</td><td>Service Level Agreement finalised between the ERWAT and the National School of Government. Action completed</td></tr>
<tr><td></td><td></td><td></td><td></td><td>CC 7.2.4</td><td>Exit Interview</td><td>RAP7.2.4</td><td>Conduct Exit interviews as and when there is a need</td><td>There were no exit interviews conducted.</td></tr>
<tr><td rowspan="3"></td><td rowspan="3"></td><td rowspan="2"></td><td rowspan="2"></td><td>CC 7.2.5</td><td>HR Policies</td><td>RAP7.2.5</td><td>Review HR Policies as and when the need arises</td><td>Action plan completed.</td></tr>
<tr><td rowspan="2"></td><td rowspan="2">Individuals not coping with the workload pressure, expectations on individuals not met and career advancement</td><td>CC 7.2.6</td><td>Recruitment Plan</td><td>RAP7.2.6</td><td>Implementation of 2021/22 recruitment plan</td><td>
<table>
<tr><th>Internal</th><th>Contractors</th><th>Permanent</th><th>Bursars</th><th>L/Ships</th><th>In-Service Trainee</th><th>Total</th></tr>
<tr><td>4</td><td>6</td><td>7</td><td>3</td><td>10</td><td>5</td><td>35</td></tr>
</table>
Appointments were made to fill various positions</td></tr>
<tr><td>CC 7.2.7</td><td>Personal Development Plans</td><td>RAP7.2.8</td><td>Implementation of the Training Plan</td><td>1. Method Validation Course - 10 delegates
2. Root Cause Analysis - 10 delegates
3. ISO Auditing - 10 delegates
4. Measurement of Uncertainty - 10 delegates
5. Minute Taking - 20 delegates
6. BBBEE Workshop - 15 delegates
7. External Bursary Candidates were recruited and started at Universities on 1 March 2022 in</td></tr>
</table>

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
									the fields of Electrical Engineering, Analytical Chemistry and Water Care. 8. Forty (40) delegates enrolled for Learnership SAQA ID 58951: National Certificate in Water and Wastewater Treatment Process Operations: 136 Credits on Level 2, start date on the 28th of March 2022 9.Ten (10) unemployed learners enrolled for Learnership SAQA ID 61709: FET Training Certificate in Water and Wastewater Treatment Process Control Supervision: 166 Credits on Level 4, start date on the 28th of March 2022
ERW8	**Potential delivery in the supply and delivery of critical goods and services**	CF8.1	Turnaround time taken for the additional spec, which is not legislated.	Compromised service delivery.	CC8.1.1	No current control	RAP8.1.1	1. Develop a Standard Operating Procedure govern the turnaround time BID processes	Action completed in quarter 2.
		CF8.2	Early commencement of bid processes result in submission of unrealistic prices that was not necessarily budgeted for in the procurement plan, which		CC8.1.2	ERWAT Procurement Plan	RAP8.1.2	Review the Procurement Plan	Action completed in quarter 2

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
			lead to non-award or cancellation of tender.						
		CF 8.3	Inadequate tracking of, and delays in signing-off of documents.		CC 8.1.3	SCM Document Movement Control Tracking Register implemented	RAP 8.1.3	3.2. Development and implementation of an integrated tracking tool (for monitoring). Tracking tool	Action plan completed.
		CF 8.4	Inadequate monitoring of contract term.		CC 8.1.4	Contract Management Register	RAP 8.1.4	Review the contract Management Register	Action plan completed
		CF 8.5	Shortage of skills within SCM(limiting continuity and turnaround time for replacement of staff)		CC 8.1.5	ERWAT Recruitment Plan	RAP 8.1.5	Appointment of SCM staff in line with recruitment plan	SCM Specialist and SCM Manager appointed
		CF 8.6	Inadequate Processes flow and monitoring of procurement processes		CC 8.1.6	Supply Chain Management Policy and the Delegation of authority	RAP 8.1.6	No further action plan identified	No action plan to be implemented by the entity for the period under review
		CF 8.7	Limitations set under the delegation of authority		CC 8.1.7	Delegation of authority	RAP 8.1.7	Review of the Delegations of Authority	Action completed

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
		CF 8.8	Lack of a multi-disciplinary SCM working committee		CC 8.1.8	No control	RAP8.1.8	Establishment of a multi-disciplinary SCM working committee	Action completed
		CF 8.9	Shortage of supplies and consumables (Scientific services, Maintenance, IPAP, Operations) from external providers for the due to pandemic (Covid-19)		CC 8.1.9	Critical Suppliers of Goods and Services Register	RAP8.1.9	Review the Critical Supplies Register	Action plan completed
ERW9	**Potential loss of the ISO 17025 Accreditation**	CF 9.1	Aging technology (Equipment replacement)	Service Delivery	CC 9.1.1	Scheduled maintenance in accordance with ERWAT Annual Maintenance Plan	RAP9.1.1	Repairs as per maintenance schedule	There was no maintenance carried out in quarter 3. Maintenance was carried out in quarter 2.
		CF 9.2	Lack of budget for infrastructure repairs. (building maintenance; HVAC)		CC 9.1.2	Environmental Monitoring (daily)	RAP9.1.2	Procurement of the HVAC System for Scientific Services	Service Provider for the HVAC System appointed and the project is at initiation phase

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
		CF 9.3	Aging instrumentation and scarcity of spares		CC 9.1.3	Internal Inspections and Assessments	RAP9.1.3	Repairs as per maintenance schedule	There was no maintenance carried out in quarter 3. Maintenance was carried out in quarter 2.
		CF 9.4	Loss of some of the approved testing methods		CC 9.1.4	External Audits	RAP9.1.4	Conduct 17025 external audits	Action plan completed in quarter 1
					CC 9.1.6	Standard Operating Procedures and Quality Manual	RAP9.1.6	No further mitigation was identified	No action plan to be implemented by the entity for the financial year under review.
					CC 9.1.7	Process audit conducted as part of the Business Continuity Assessment	RAP9.1.7	No further action plan identified	No action plan to be implemented by the entity for the financial year under review.
ERW10	**Potential Loss of and Unauthorised Access Critical Information**	CF 10.1	Lack of document and records management Policies and procedures	Service Delivery	CC 10.1.1	Information, Communication and Technology Policy	RAP10.1.1	Develop Document Management Policy	A draft Document Management Policy, is pending finalisation. The finalisation of the policy is dependent on the implementation of the Document Management System in the ERP. The roll-out is part of the City's ERP System
		CF 10.2	Lack of Documents and Records management Systems		CC 10.1.2	ERWAT Public Drive Communications Policy	RAP10.1.2	Implement Document Management System	The initial Document Management System did not pass the User Acceptance Testing level as it did not System meet the Business Requirement. An alternative Document Management System being rolled-out.

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
		CF10.3	Inadequate Information Security Measures and Record Measures		CC10.1.3	Computer Systems are Password Protected	RAP10.1.3	Develop a Protection of Personal Information Policy	Action plan completed quarter.
		CF10.4	Non-Compliance and Inadequate Business Process on Information and Records Management		CC10.1.4	Security Services Policies	RAP10.1.4	Develop an SOP on Document and Records Management	The finalisation of the Standard Operating Procedure is pending finalisation of the Document Management Policy. The policy cannot be finalised prior to the implementation of a Document Management System as part of the an ERP.
		CF10.5	The use of social media applications which are not linked to company security measures and back-up systems.		CC10.1.5	Guarding Procedure	RAP10.1.5	Review/Update the Business Process on Document and Records Management	Action plan is pending finalisation. The finalisation of the policy is dependent on the implementation of the Document Management System in the ERP.
					CC10.1.6	Net Trace to wipe off information in lost or stolen computer systems	RAP10.1.6	No further action plan identified	No action plan to be implemented by the entity for the financial year under review.
ERW111	**Potential injuries to personnel, visitors and contractors**	CF11.1	Non-Compliance to the OHS policies and Standard operating procedures.		CC11.1.1	Occupational Health & Safety Policy	RAP10.1.1	Update COVID-19 Standard Operating Procedure	Covid-19 Standard Operating Procedure was tabled at EXCO on the 22th of march 2022 and approved. Action completed

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
		CF11.2	Vandalism theft, and armed robberies	Delay the availability of analysis results	CC11.1.2		RAP10.1.2	Review the Safety BCM Plan	Action plan completed
		CF11.3	General condition of workplace (slippery conditions)		CC11.1.3	Occupational Health & Safety Procedures (SOPs)	RAP10.1.3	Pre-employment medicals as and when the need arises	There were no medicals scheduled for quarter 3.
					CC11.1.5	Security Services Policy	RAP10.1.4	No further action plan to be implemented	No action plan to be implemented for the financial year under review
					CC11.1.6	Security Awareness Program	RAP10.1.4	Conduct Security Awareness	There was no Security Awareness was scheduled for quarter 3. Further Awareness is scheduled for quarter 4.
					CC11.1.7	Safety Awareness through Toolbox Talks Central Safety and District Safety Committee	RAP10.1.4	No further action plan identified was identified	No action plan to be implemented for the financial year under review
					CC11.1.8	Safety Standard Operating Procedure	RAP10.1.4	Review of the Safe Work Standard Operating Procedure	Action Plan completed. Safe working procedure has been reviewed and approved by the OHS Committee, and signed off by the Accounting officer by the accounting officer in December 2021.
					CC11.1.9	Safety Risk Assessments	RAP1	Conduct Safety Risk Assessment review	A Safety Risk Assessment conducted at Heineken.

REF	Risk Title	Contributing Factors		Impact / Consequences on the ERWAT		Current Mitigation Controls	RAP	Risk Action Plan	Action Plan Progress Quarter 3
							0.1.4		
					CC 11.1.10	Training Plan	RAP1 0.1.4	Implementation of 2021-2022 OHS Training, in line with the ERWAT wide training plan Skills Training Safety Awareness Training	Statutory Training - Chlorine Handling Training attended by 86 employees on from 14th and 17th March 2022.
					CC 11.1.11	Safety awareness through Tool box talks /Induction (company-wide and site induction)	RAP1 0.1.7	No further mitigations was identified	No action plan to be implemented for the financial year under review.

Emerging Risks (Narrative)

Insurance Risks

Inadequate maintenance of assets remain critical as the entity may loose the insurance cover Uncontrolled Fruitless and Wasteful expenditure to result in the entity not covered for Directors and Officers Liability and Commercial

7. Legislative (only if applicable to your department)

The entity acknowledges that legislation is crucial to it's existence and operations. Management and the board has identified and prioritised seven (7) key legislation for monitoring. Compliance risk management plans are developed to ensure that all the risks are mitigated. Any changes to legislation is aligned with internal policies and processes The Regulatory Landscape consist of the following

1. National Water Act 36 of 1998

2. National Environmental Management Act

3. Companies Act 71 of 2008

4. Municipal Finance Management 56 of 2003

5. Labour Relations Act 66 of 1995

6. Occupational Health and Safety Act 85 of 1993

7. Disaster Management Act 57 of 2005

8. Key Audit Matters and Progress

Please refer below to the OPCA progress report:

No.	Finding Heading	Status	Action plan
1	Fruitless and wasteful expenditure not prevented	Resolved	• Improved cash flow Management procedures. SOPs have been developed and implemented in this regard, these are currently being audited by internal audit in their follow-up audits. • Re-configuration of the system to ensure it involved little manual intervention. This project is being implemented with BCX and tracked on a weekly basis. • Continuous awareness on cyber-attacks being communicated via company news flashed. • Improved procedures implemented when performing changes to the employee details, including a signed form by employee, stamped bank confirmation letter with employee's ID and details, as well as approval from HR and CFO
2	Irregular expenditure not prevented	Unresolved	• Development of SOP's in order to streamline processes to be in line with relevant legislation. SOPs have been drafted and are being communicated to the business. • Reduced use of deviations, particularly based on impracticality. An SOP with guidelines on appropriate use thereof is in draft phase.
3	Assets not adequately tagged	Unresolved	• Acquisition of tagging equipment. The advertisement has closed and the evaluation process has commenced.
4	Consistency of reporting of % target on Maintenance KPI	Resolved	• Continuous review of the approved business plan against reported targets.
5	ICT control deficiencies	Unresolved	• Obtaining appropriate approval for policies (Approval by the board).
6	Appropriation statement differences – Resolved	Resolved	• Implementation of Adequate segregation of duties to ensure proper reviews are performed on the AFS before being submitted to the AGSA for audit purposes. • Filling of vacancies in order to allow for appropriate reviews. This process has commenced.
7	Deviations not in line with regulation 36	Resolved	• SOP on guidelines on the appropriate use of deviations is in draft and will be communicated to the organisation.
8	CAPEX expenditure differences on reporting	Resolved	• Continuous review of the approved business plan against reported targets.
9	Maintenance expenditure differences on reporting	Resolved	• Continuous review of the approved business plan against reported targets.
10	Irregular expenditure Disclosure	Resolved	• N/A
11	Consequence management	Unresolved	• Finalisation of 2018/19 investigations into irregular expenditure. • Finalisation of charge sheets issued to implicated employees.