



# ERWAT: First Quarter Departmental Performance Reporting Template

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## 2022\_2023\_QUARTERLY REPORTING TEMPLATE AGAINST THE APPROVED BUSINESS PLANS

### 1. Executive Summary by the Department

ERWAT achieved three (3) out of the six (6) reportable key performance indicators. ERWAT did not meet its targets on external revenue due to the System non-integration Service interruption due to HVAC system upgrade. The compliance in terms of the wastewater treatment works license conditions and/or exemptions standards was 78% against the set target of 80% for quarter 1. The challenges for not meeting the target were based on Industrial pollution incidents, Critical Equipment failures and loadshedding, Critical Chemicals Shortages and non-availability of results from the ERWAT Laboratory.

Percentage procurement spend allocated to SMME's was exceeded due to measures put in place at specification stage to prioritise SMME's on certain contracts. Percentage capital expenditure on planned projects was also met however percentage of repairs and maintenance budget spend was not met.

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**

<b>Service Delivery Monitoring</b>					
	<b>Total number of targets</b>	<b>Total number of targets set for the quarter</b>	<b>Achieved</b>	<b>Not achieved</b>	<b>Variance</b>
<b>City Wide SDBIP</b>	3	2	0	2	2
<b>Department SDBIP</b>	5	4	3	1	1

## 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)

#### **Q1 Target**

R8 000 000

#### **Q1 Actual**

R6 980 893.05

#### **Comment:**

The target for the first quarter of R8 000 000 in external revenue was not achieved.

#### **Target Exceeded**

The target was not achieved owing to the non-integration of invoice from the system. This means that some of the invoices were not accounted for in the revenue reported. The laboratory invoice for the City of Ekurhuleni for the month of September 2022 was also not done due to service interruptions caused by the upgrading of the laboratory HVAC system.

#### **Corrective Measure**

Finance department to engage with the service provider to ensure that the integration is done timeously.

#### **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

**Q1 Target**

Not reportable in this Quarter

**Q1 Actual**

Not reportable in this Quarter

**Comment**

Not reportable in this Quarter

**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.

**Q1 Target**

80%

## **Q1 Actual**

78%

## **Comment**

KPI not achieved.

## **Reasons for non-compliance**

1. Industrial pollution incidents
2. Critical Equipment failures and loadshedding
3. Critical Chemicals Shortages
4. Non availability of results from the ERWAT Laboratory.

### **1. Industrial pollution incidents:**

Some WCW (water care works) received industrial pollution during Quarter 1 impacting negatively on the plant operations and final effluent compliance. Refer to Table below and Section 3.4 for further details of organic loading per WCW.

<b>WCW</b>	<b>Number of industrial pollution incidents in Q1(days)</b>
Dekema	8 of 91
Rondebult	11 of 91
Rondebult	11 of 91
Bickley	12 of 91
Esther	15 of 91
Heidelberg	19 of 91
Olifantsf	24 of 91
Ancor	37 of 91
Harties	88 of 91

It should be noted that even though some the WCW listed above met the target, they still had challenges with industrial pollution.

**2. Critical equipment failures and Loadshedding incidents:**

The following WCWs experienced several critical equipment failures and loadshedding incidents during Quarter 1 impacting the compliance of the WCWs directly. It must be noted that the impact of loadshedding during ESKOM stages 4-6 have an increasing detrimental impact on the WCW as the processes don't have sufficient time to recover between outage periods.

<b>WCW</b>	<b>Critical equipment failures Q1 2022/2023</b>	<b>Loadshedding(hours) Q1 2022/2023</b>
Benoni	2	31
Esther Park	4	125
Hartebeestfontein	16	212
Olifantsfontein	22	2
Rynfield	1	163
Ancor	5	0
Daveyton	4	234
Heidelberg	6	196
Jan Smuts	0	224
JP Marais	27	254
Welgedacht	70	14
Carl Grundlingh	2	0
Herbert Bickley	4	169
Ratanda	8	27
Tsakane	8	222
Dekema	2	275
Rondebult	0	155
Vlakplaats	8	179
Waterval	90	0

It should be noted that several critical equipment failures were not resolved in Q4 or Q1 and are therefore carried over from quarter to quarter. Furthermore, some of the WCW do not have installed generators whilst others are not operational, awaiting repairs.

**3. Critical Chemical shortages**

Due to ongoing challenges at the manufacturing plants of the sole supplier, a National shortage of ferric chloride and chlorine gas were experienced, impacting directly on the quality of the final effluent of most of the WCW.

<b>WCW</b>	<b>Ferric chloride shortages (Number of days)</b>	<b>Chlorine gas shortages (Number of days)</b>
Benoni	91 of 91	0 of 91
Hartebeestfontein	88 of 91	0 of 91
Olifantsfontein	87 of 91	0 of 91
Rynfield	91 of 91	0 of 91
Ancor	71 of 91	0 of 91
Jan Smuts	26 of 91	0 of 91
Welgedacht	19 of 91	0 of 91
Herbert Bickley	20 of 91	0 of 91
Dekema	89 of 91	0 of 91
Rondebult	89 of 91	0 of 91
Vlakplaats	58 of 91	0 of 91
Waterval	0 of 91	15 of 91

Ferric chloride is used in the treatment process to remove ortho-phosphate from the final effluent as well as improving the settleability of solids in the settling tanks, whilst chlorine gas is used to disinfect the final effluent before discharge to the receiving water bodies.

**4. Non-availability of E.Coli analysis from ERWAT Laboratory**

All WCWs were impacted by the non-availability of E Coli analysis results from the laboratory due to the installation of a critical HVAC system at the Laboratory building. As such the compliance samples could not be analysed. E Coli compliance is a critical final effluent compliance parameter, therefore the unavailability of the analysis results from 27 – 30 August 2022 impacted the overall final effluent compliance of each WCW.

**Action plans:**

**1. Industrial pollution incidents**

ERWAT works closely with the CoE and report all incidents as soon as detected to assist in tracing the source of the pollution. ERWAT and CoE have worked jointly on a concept to develop an improved industrial effluent management model. The CoE must appoint a professional

service provider (project has not moved forward due to lack of funding since 2018 due to a lack of funds)

## 2. Critical equipment failures and loadshedding events

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, therefore breakdowns frequently occur.

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.

## 3. Chemical shortages (Ferric chloride and Chlorine gas)

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 had a shut down on the manufacturing plants in July 2022 for a period of 5 weeks to perform essential refurbishment and maintenance, but still had challenges with start-up of the plant and the production is not consistent. It must also be noted that preference is given to potable water plants over wastewater plants due to the health hazard of drinking water that is not disinfected. The availability of product has improved during September 2022 and the supplier is busy clearing the backlog, starting at the priority WCW.

## 4. Non-availability of E.Coli analysis from Laboratory

The installation of the HVAC system at the Laboratory was completed by 30 August 2022 and the laboratory results are released as usual.

## **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

#### **Q4 Target**

35%

#### **Q4 Actual**

36.84%

#### **Reasons for Variance**

ERWAT has currently spent R33 727 814.84 (36.84%) of its capital budget at the end of the first quarter. The planned SDBIP target for the quarter has been achieved with a 1.84% positive variance.

#### **Remedial Actions:**

None

## **KPI 1 – Departmental 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 (Budget Variance Report)

**Q1 Target**

25%

**Q1 Actual**

18%

**Comment:**

The department did not achieve the 25% target as planned, If the amount of committed funds outstanding is all paid in full during this financial period, then the target will be achieved.

The expenditure year to date is R6 012 118,58 against the approved maintenance budget of R33 828 912,50.

This yields to 18% repairs and maintenance budget spent in Quarter 1 and the variance thereof is 7%.

**Reasons for Variance**

The reasons are attributed the delay in the appointment of spares supply contracts. The other factor is due to non-payments of invoices in the previous quarter that has resulted into significant high committed funds.

**Remedial Actions:**

Department is in the process of appointing a service providers

**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 as 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.

**Q4 Target**

45%

**Q4 Actual**

79%

**Comment:**

Term contracts in place with QSE and or EME accreditation

**Remedial Actions:**

None

**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

**Q1 Target**

Not reportable in this Quarter

**Q1 Actual**

Not reportable in this Quarter

**Comment**

Not reportable in this Quarter

**KPI – 5 Department SDBIP**

**Total rand value of surplus realised from revenue generated from external business**

**Method of Measure**

This will be calculated by subtracting the total expenditure from the revenue generated.

**Evidence**

1. General ledger with a balance that agree to the amount reported
2. Invoices Listing  
Invoices - (The invoices to be coupled with general ledger with a balance that agree to the amount reported for SDBIP purposes)

**Q1 Target**

R2 000 000

**Q1 Actual**

**R2 678 827.82**

**Comment:**

The target for the first quarter of R2 000 000 was achieved and exceeded by R392 087.47.

**Target Exceeded**

The target was exceeded due to vacancies in the department.

**Corrective Measure**

Recruit for existing vacancies

### 3.1 City-Wide/Institutional SDBIP 2022/23

## Refer to the City-wide SDBIP 2022/23.

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 (2021/22)	Annual Target (2022/23)	Planned Target Quarter 1	Actual Output Quarter 1	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 1	Actual Expenditure Quarter 1
<b>IDP Strategic Objective 2: To Build a Clean, Capable and Modernised Local State</b>															
Ekurhuleni Water Care Company (ERWAT)	Improved Quality of water (including wastewater)	ER W1.1	Total revenue generated from external business	Invoices coupled with general ledger with a balance that agree to the amount reported	R 11 731 475	R34 000 000	R8 000 000	R6 980 893.05	R1 019 106.95	Target not achieved	Target not achieved for the quarter.	System non-integration Service interruption due to HVAC system upgrade	Escalation of system error to the service provider. Completion of upgrades	OPEX	OPEX
	To build a clean, Capable and Modernised Local State	ER W1.2	Audit Opinion	Dated and signed Audit report from AGSA	Unqualified	Unqualified Audit Opinion	N/A	NA	NA	NA	NA	Reportable in Quarter 3	Reportable in Quarter 3	OPEX	OPEX
<b>IDP Strategic Objective 4: To protect the natural environment and promote resource sustainability</b>															
Ekurhuleni Water Care Company (ERWAT)	Improved Quality of water (including wastewater)	ER W1.3	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	84%	80%	80%	78%	-2%	Target not achieved		1. Industrial pollution incidents 2. Critical Equipment failures and loadshedding 3. Chemicals Shortage 4. Non availability of E-coli results	1. Industrial pollution incidents ERWAT works closely with the CoE and report all incidents as soon as detected to assist in tracing the source of	opex	

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2021/22)	Annual Target (2022/23)	Planned Target Quarter 1	Actual Output Quarter 1	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 1	Actual Expenditure Quarter 1
				of each Wastewater Treatment Works									the pollution. ERWAT and CoE have worked jointly on a concept to develop an improved industrial effluent management model. The CoE must appoint a professional service provider (project has not moved forward due to lack of funding since 2018 due to a lack of funds) 2. Critical equipment failures and loadshedding events Asset Care plans for critical equipment were developed for all WCW and		

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2021/22)	Annual Target (2022/23)	Planned Target Quarter 1	Actual Output Quarter 1	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 1	Actual Expenditure Quarter 1
													partially implemented due to a lack of OPEX budget to implement the plans in full, therefore breakdowns frequently occur. 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		

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2021/22)	Annual Target (2022/23)	Planned Target Quarter 1	Actual Output Quarter 1	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 1	Actual Expenditure Quarter 1
													<p>extended outage periods due to the very high consumption rate of diesel.</p> <p>3. Chemical shortages (Ferric chloride and Chlorine gas) 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 had a shut down on the manufacturing plants in July 2022 for a period of 5 weeks to perform</p>		

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2021/22)	Annual Target (2022/23)	Planned Target Quarter 1	Actual Output Quarter 1	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 1	Actual Expenditure Quarter 1
													essential refurbishment and maintenance, but still had challenges with start-up of the plant and the production is not consistent. It must also be noted that preference is given to potable water plants over wastewater plants due to the health hazard of drinking water that is not disinfected. The availability of product has improved during September 2022 and the supplier is busy clearing the		

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2021/22)	Annual Target (2022/23)	Planned Target Quarter 1	Actual Output Quarter 1	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 1	Actual Expenditure Quarter 1
													backlog, starting at the priority WCW. 4. Non-availability of E.Coli analysis from Laboratory The installation of the HVAC system at the Laboratory was completed by 30 August 2022 and the laboratory results are released as usual		

### 3.2 Entity's SDBIP Score card with Key Performance Areas and Indicators 2022/23

Table 2: Entity's SDBIP

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2021/22)	Annual Target (2022/23)	Planned Target Quarter 1	Actual Output Quarter 1	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 1	Actual Expenditure Quarter 1
<b>IDP Strategic Objective 2: To build a clean, capable and modernized local state</b>															
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	15.8%	95%	35%	36.84%	1.84	Achieved	Achieved	Goods delivered prior planned time of delivery	None	R32,045,580	33 727 814.84
	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	37%	95%	25.00 %	18%	7%	Performance not achieved	Performance not achieved	The reasons are attributed the delay in the appointment of spares supply contracts	Department is in the process of appointing a service providers	R33 828 912,50	R6 012 118,58
	Improved Quality of Water including Wastewater	3.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	93%	45%	45%	79%	34%		Achieved	Term contracts in place with QSE and or EME accreditation	None	OPEX	R19 565 514
	Improved Quality of Water including Wastewater	4.M	Number of repeat Audit findings	AGSA signed management letter	3	0.00	0.00	NA	NA	NA	NA	Reportable in Quarter 3	Reportable in Quarter 3	OPEX	OPEX
	Improved quality of water	4.M	Total rand value of surplus realised from	General Ledger with a balance amount that	R7 017 841	R10 000 000	R2 000 000	R2 678 827.82	R678 827.82	Target met and exceeded	Target met and exceeded	The target was exceeded	Recruit for existing vacancies	Opex	Opex

Entity	Outcome	Ref No.	Performance Indicator	Portfolio of Evidence	Baseline (2021/22)	Annual Target (2022/23)	Planned Target Quarter 1	Actual Output Quarter 1	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	Planned Budget Quarter 1	Actual Expenditure Quarter 1
	including wastewater		revenue generated from external business	agrees with the amount reported AND Listing of invoices								due to vacancies in the department.			

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

NB: Reflect on the day to day activities that may not be in the Departmental Scorecard but constitute a key mandate of the department. Some of the day to day activities may be in the DH: Scorecards. This may also include the **Mayoral Lekgotla Action Plan, State of the City Pronouncements etc.**

#### A Flows

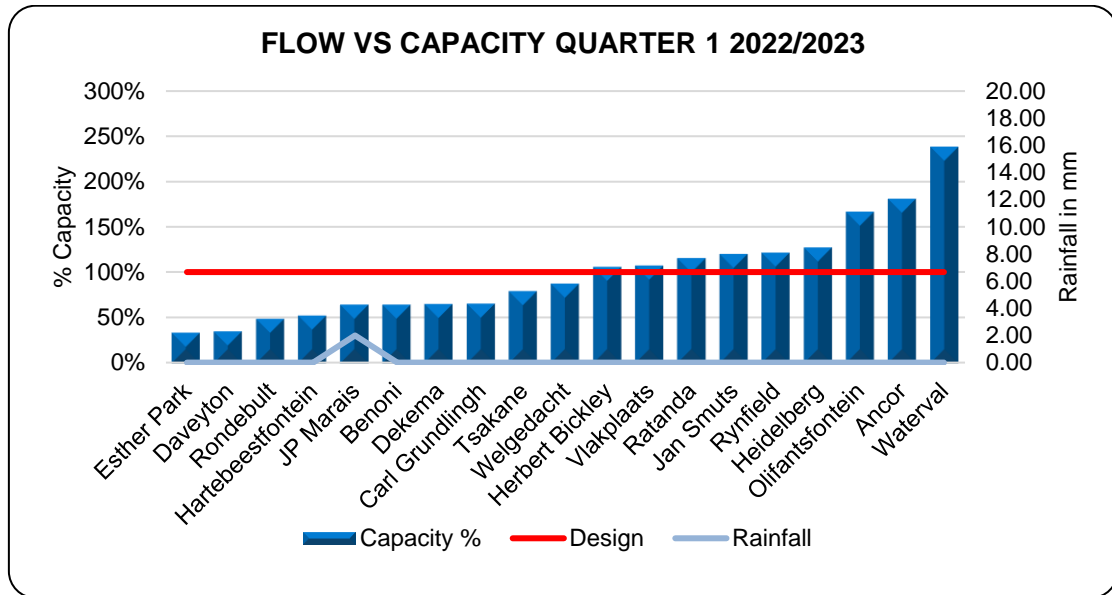


Figure 1

A total of 79 773.15 MI was treated in Quarter 1, at an average of 876.24 MI/day, utilising 141% of the capacity. The decrease in flow as from Q4 is as a result of the dry season and sewer blockages in the conveyance system, therefore not all flow received at the respective WCW.

Flows

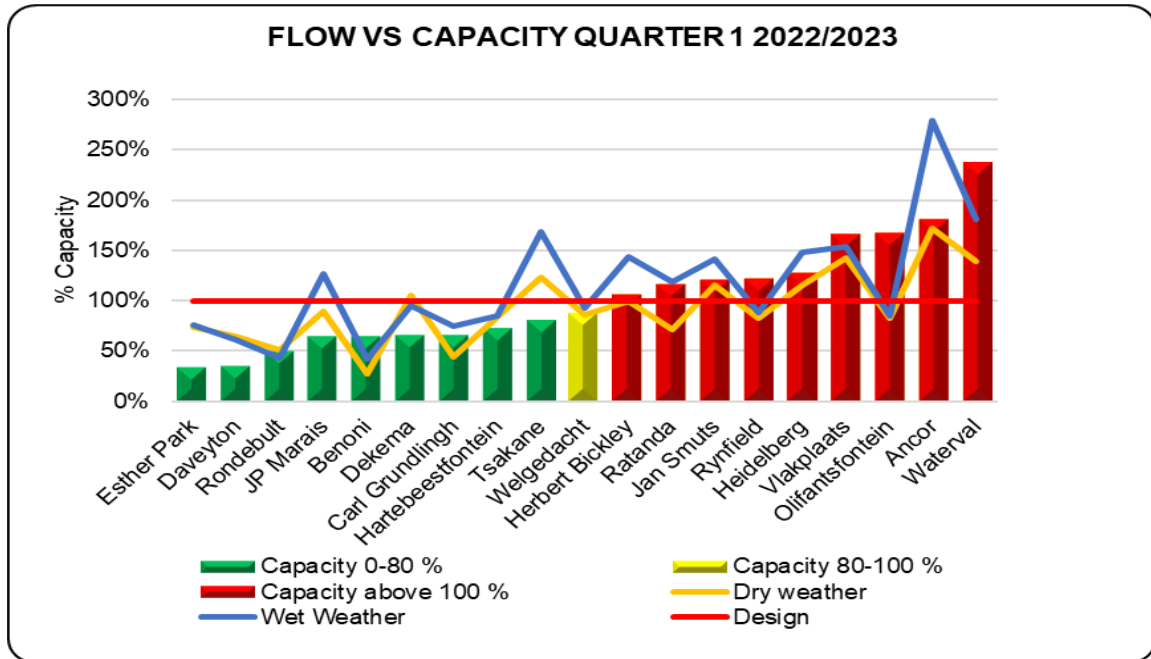


Figure 2

As can be noted in the above graph, during Q1 nine (9) out of nineteen (19) WCW were operating above their hydraulic design capacity, one (1) operating between 80% and 100% and nine (9) below their hydraulic design capacity

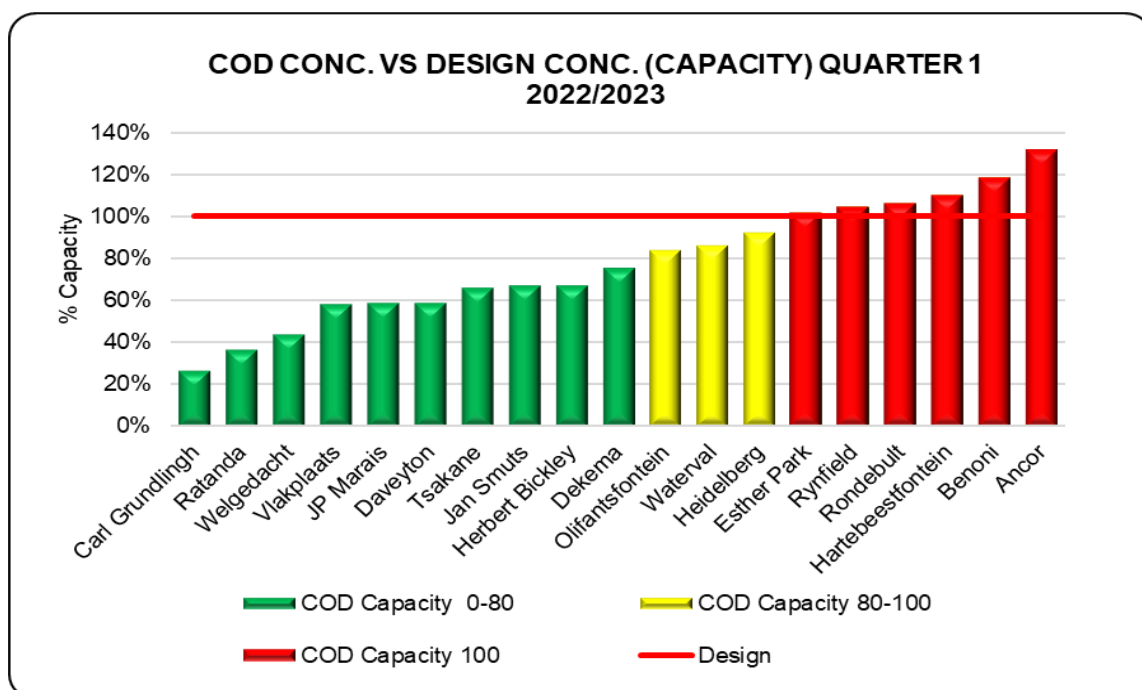
Ancor operated at 180%, Jan Smuts at 120%, Heidelberg at 127%, Herbert Bickley at 106% Olifantsfontein operated at 166%, Rynfield at 121% of its capacity, with large regional plants such as Vlakplaats operating at 166% and Waterval operating at 237%. Additional capacity is urgently needed at Olifantsfontein WCW. The bid document for the pipelines installation to feed the other 4 of 6 biofilters is ready and awaiting capex funds.

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.

.3 **Flow and Rainfall table**

	Design Capacity	Actual Q1	Rainfall Q1
Ancor	15.00	27.07	1.00
Benoni	7.50	4.84	0.00
Carl Grundlingh	5.20	3.40	3.00
Daveyton	19.00	6.67	0.50
Dekema	31.00	20.17	0.00
Esther Park	1.40	0.47	3.00
Hartebeestfontein	63.00	45.61	3.00
Heidelberg	5.40	6.87	0.00

	Design Capacity	Actual Q1	Rainfall Q1
Herbert Bickley	15.10	15.95	3.00
Jan Smuts	6.00	7.20	3.50
JP Marais	15.00	9.63	8.00
Olifantsfontein	65.00	108.04	0.00
Ratanda	4.70	5.42	5.00
Rondebult	20.00	9.79	4.00
Rynfield	9.80	11.88	0.00
Tsakane	20.00	15.87	24.00
Vlakplaats	55.00	91.05	0.00
Waterval	170.00	403.40	0.00
Welgedacht	95.00	82.90	17.50



**Figure 3**

As can be noted, 6 (six) WCW operated above 100% organic capacity, 3 (three) WCW's operated between 80-100% of the organic design capacity and 10 (ten) below their design capacity during Q1.

### 3.4. Service

#### Action Plan 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
<b>Benoni</b>	The Plant complied with overall WUL effluent standards with Overall compliance of 91% in Q1 was achieved against the target of 92%. Chemical= 93% Physical= 94% Micro= 86%	Plant operated at 65 % of re-graded hydraulic capacity in Q1	Plant operated at 76% of re-graded organic capacity in Q1	There were abnormal flow fluctuations in Q1 due to Tom Jones sump maintenance and Eskom load shedding.	There were 10 high strength COD from industrial pollution in Q1	There was 2 critical equipment failure in Q1	There were 9 power outages in Q1 and duration was 31 hrs	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 groundwater pollution in Q1	None	None	Sludge classification A1c Screenings and grits that are generated at the plant and are collected by CoE.	None	None
<b>Esther Park</b>	Overall compliance = 85% in Q1 was achieved against the target of 89% and 90% best practice.  Physical:	Plant operated at 34 % of hydraulic capacity (Based on regraded capacity of 1.4 MI/d)	Plant operated at 48 % of organic capacity for Q1.	Plant experienced 4x abnormal flows in Q1 above regraded design capacity of 1.4 MI/d	15x Industrial effluent pollution incidents in Q1.	4x critical equipment failure occurred in the quarter.	41x power failure incidents recorded in Q1 lasting for total downtime of 125 hours – Load	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
	95.95% Chemical: 79.94% Micro: 80.32%.						shedding										
<b>Hartebeestfontein</b>	Overall compliance = 85% in Q1 was achieved against the target of 89% and 90% best practice  Physical : 86%  Chemical: 50%  Micro: 60%	Plant operated at 72% of hydraulic capacity.	Plant operated at 80% of organic capacity	The plant experienced a slightly low inflows in Q1 due to continuous load shedding with average flows of 38 MI/d.	Plant received industrial high strength effluent 51 times out of 30 days during September 2022.	16 Critical equipment failures occurred in September 2022.	There were 66 power outages in Q1 for duration of 212 hours	Aging infrastructure: Ferric plant, chlorine, thickener s, clarifier 1-4 bridge and siphons.	Digester 1, 4,6 and 9 sludge recirculation nozzles blocked	There were no veld fires experienced in September 2022	468 000 kg of dry sludge was irrigated to the 200 hectares farm.	Borehole two has high concentration of Nitrate s.	Sinkhole next to the fence towards FST 5 & 6 and around the Farm.	Licenses 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 was done in June 2022.	There was 0 portable leak of main line feeding farm houses
<b>Olifantsfontein</b>	Overall compliance of 61% in Q1 was achieved against the target of 60% and 90%	Plant operated at a hydraulic capacity of 166% of the regraded	Plant operated above organic capacity by 140%	There were abnormal fluctuations of inflows in Q1 22-23 With	Plant received industrial high strength effluent	22 critical equipment failures occurred in Q1 22-23, with failures being 6 in	There was one power failure in Q1 22-23 with a duration	Module 3 Anaerobic digesters .	Digester 4 of 6 digesters are blocked due to sand	There was one veld fires in September	Total sludge of 412 825 kg was produced in Q1 22-23.	Offline emergency dams contaminated	2 x Sinkholes behind and in front of the old	Olifantsfontein WUL is stringent on Ammonia of	Sludge is classified into three streams: (1). Dewatering unit(B3a), the sludge not suitable for	Road to upstream sampling point need to be graded	YES, there is a water leak that is reoccurring and resultin

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
	best practice  Chemical= 59% Physical= 43% Micro= 80.%	capacity in Q1 22-23  With an average flow of 108ML/d	in Q1 22-23.	ranges of 93-123 MI/d in July, 96-117 MI/d in August, and 86-122 MI/d in September 2022.	t (very high Electrical Conductivity above 100 mS/m) with 51 days in Q1 22-23  (9 days in July  14 days in August and  28 days in Sep 2022 )  Plant also experiences fine sand ingres	July, 8 in August and 10 in September 2022	of 2 hours on the 14 <sup>th</sup> Sep 2022. One genset was in operation with 208l diesel consumption,		accumulation	mber 2022	With 104 212 kg in July, 142 008 kg in August, and 166 825 kg in September. Sludge production is affected by frequent FBP breakdowns. Sludge is disposed on different farms around Bapsfontein area and is used for agricultural purposes	borehole no.2&3 . Borehole 1 runs dry during dry seasons	laboratory which occurred in Dec 2019 still not rehabilitated	< 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 and odour complaints.	and there is high erosion on the banks. To be reported to the CoE..	g in water loss

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
					s, and fats pollution that solidifies in sedimentation tanks as scum.												
<b>Rynfield</b>	Overall compliance of 68% in Q1 was achieved against the target of 79% and 90% best practice  Chemical= 46% Physical= 93% Micro= 65%	Plant operated at 121% of hydraulic capacity	Plant operated at 124% of organic capacity	July 2022 flow has increased because of New pump station and dropped during August and September 2022	None	1 critical equipment failures occurred in Quarter 1 2022 that affected Ammonia, Nox, COD and phosphate compliance	Rynfield had 34 power outages with total of 163 hours	Pavement Cracked and Digesters & reactor tank concrete structure is cracked .Bio-feeder structure is cracked.	None	None	Dried sludge is stockpiled on the plant	Unlined sludge paddies, Unlined Maturation ponds and Contact tank. Lagoon	N/A	N/A	Waiting for Sludge classification results. CoE collects screenings and grits from the inlet works.	N/A	N/A
<b>Ancor</b>	Plant compliance for Q1 is 44% Non-compliant parameters	Plant operated at 180% of its hydraulic capacity	Plant operated at 132% of organic capacity, which	Ancor experienced storm water ingress during	Plant received high COD industrial	5 critical equipment failures occurred in Q1,	0 outages occurred (0 hrs. total)	Bio filter flow division boxes partially collapsed,	3 digesters blocked with sand and are	No veld fires occurred during Q1.	Stockpile area not lined. Stockpiles on plant is	Unlined sludge paddies pollute	Area around humus tanks and	N/A	CoE removes solid waste (screenings and grit).	Access road in bad condition with lots of	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
	rs: Chemical 35%, Physical 73% and Micro 22%	capacity	is lower than the loads received pre-lockdown, Q3-	heavy rainfall, worsening the overloaded hydraulic capacity; however, the RSA COVID - 19 lockdown reduced flows to the WCW.	effluent on 25 of 92 days. In Q1, decrease due to no storm water ingress		(Generator backup available for whole plant except disinfection section).	humus tanks/ PST's- and digesters structures are crumbling /cracked	not in operation. This cause the plant to run out of sludge handling capacity, which prevent proper de-sludging and resulting in non-compliances.		a risk due to veld fires and environmental pollution	underground water	final effluent channel are dolomitic according to Geotech study performed.			potholes	
<b>Daveyton</b>	Plant compliance for Q1 22/33 is 94.00 %.	Plant operated at 35.1 % of its hydraulic capacity in Q1.	Sufficient capacity. Plant operated at 58.9 % of its organic capacity in Q1.	Numerous sewer blockages in the CoE network, Power supply interruption at Etwatwa ext.10 pump	N/A. Domestic only.	4 Critical equipment failures occurred in Q1 namely: Degritters , compressor, BNR screen,	100 power outages occurred in Q1 lasting 234 hours in total. Power outages was due	CCT sometimes leaking. Do not have direct impact on the operation of the	N/A	There was a fire at the sludge lagoons on the 12 July 2022, the fire was	Sludge lagoons are unlined Space for solar drying is insufficient	Unlined sludge lagoons pollute the ground water.	N/A	N/A	Screenings is collected by COE for proper disposal.	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
				station and potable water supply interruption to Etwatwa lead to inconsistent and irregular flow to the plant.		and grit classifier	to load shedding on the network.	plant at the moment		started outside the perimeter fence and it ended up inside the lagoons. Portion of the fence was damaged and fire brigade was called to stop the fire from spreading							
<b>JP Marais</b>	Plant compliance for Q1 is 96%.	Sufficient capacity. Plant operated at 64% of	Sufficient capacity. Plant operated at 59% of	None in Q4	None in Q4	27 critical equipment failures occurred in Q4, namely; 3 x WAS pumps, 1	45 load shedding (254 hours)	None	N/A	No veld fire incident experienced	Sludge pumped to Welgedacht, where it	Some boreholes polluted. Ongoing monitoring	No dolomitic soil	N/A	CoE removes solid waste (screenings and grit) except for PST screenings, due to no	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
		hydraulic capacity	organic capacity			1 x Raw sampler, 2 x PST pumps, 1 x PST blockage, 1 x clarifier bridge, 13 x RAS pump, 2 x Chlorine monitoring scales and 1 x Chlorine rotameter				1 x Veld fire occurred in Q4	1 x Sludge is treated.	1 x Groundwater ring of boreholes.			1 x Solid Waste screen compactor.		
Welgedacht	Plant compliance for Q1 is 89%.	WCW operated within design capacity of 87% of its capacity	Sufficient capacity WCW operated at 44% organic capacity.	None	3 x Coloured influent and 1 x High incoming COD Load	70 critical equipment failures occurred in Q1, Dewatering screw conveyor X3, Poly pump 3, Compact or A X5, Clear view fence X2, Chlorine booster pumps	2 x power outages which lasted for 14 hours due to failures at Eskom substation supplying Welgedacht	N/A	N/A	No veld fires occurred during Q4.	None	1 x Unlined De-chlorination channels and Emergency dam	N/A	N/A	1 x CoE removes solid waste (screenings and grit).and dispose at licensed solid waste site.	1 x 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

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	
						x8, Borehole booster pump, Balancing tank wash water, chemical lifting pump x3, RAS PUMP 1X2, Sludge feed Pump no 3 x2, Blower no 5, blower no 4, RAS screw B2, RAS pump no6 x2, Ras pump no 2x2, RAS pump no 3x3, RAS pump no 4 X3, RAS Pump no 5, Aerator no 12, Aerator no 13,	substation											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
						Aerator no 14,Aerator no 10 x3,Aerator no 16,mixer no 4 x2 PST B Bridge, Poly sensor, poly solenoid, poly pump no 4x3,poly pump no 1X4,wash water pumps x7, belt no 3,recycle screen no 2,module 1 inlet panel,RA S Screen, Waste screen x2, gen-set module 1 inlet,gen-set mod 2inlet,big pump x2,											

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
						belt no 2,inlet blower mod 1,Balancing screw pump,Lifting screw pump X3											
Jan Smuts	Plant compliance for Q1 is 73%.	Plant operated at 120% of its hydraulic capacity	Plant operated at 67% of its organic capacity.	Fifteen (15) days of High incoming flows in Q1	Plant received industrial high strength effluent on 3 of the 91 days in Q1	Q1 we had to lower the chlorine pumps in the sump to be able to still dose chlorine when water levels are low	46 Power outages (224 hours total) due to load shedding, Generator backup is not operational	Humus Tanks scum boards, digester number 2's wall, drying beds' walls and the bio-filters' feed flow division box/tower.	None	1 veldfires occurred on 25 August 2022, during Q1	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 on site. This practice does not comply with WUL conditions.	Fair	Rand Water
Heidelberg	Plant Compliance for Q1 is (91%). Physical 100%,Chemical 77% and Micro 96%	Plant operated at 127% of its hydraulic capacity	Plant operated at 92% of organic capacity	High incoming flows	Plant received high COD industrial effluent on 17 of 92	6 Critical equipment failures for Q1 3x Aerators, 1x Generator, 1x Belt press and	Heidelberg had 47 power outage with a duration of 196 hours. Diesel	The joint sealants of Carousel reactor concrete wall are damaged	None	No veldfires occurred during Q1.	Sludge at the plant stockpiled after dewatering, and is also applied/irrigated	Unlined sludge paddies/lack of groundwater monitoring in	None	None	Screenings and grit generated at the plant buried and this practice is not environmentally friendly. Potential	The access road to Heidelberg works is severely damaged and a new-	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
					days and high SS on 13 days of 91.	1xHigh Mast light	used was 9716 L				to the lands and could potentially contaminate groundwater resources	the sludge paddies			groundwater pollution	tarred road is required urgently	
<b>Herbert Bickley</b>	Plant Complied with WUL effluent standards (Q1 - 85%) Physical 95.67%, Chemical 88.24% and Micro 70.82	Plant operated at 106% of hydraulic capacity	Plant operated at 67% of organic capacity	High incoming were experienced in Q1.	Plant received industrial high strength effluent on 10 of 92 days	4 Critical Equipment 2x booster pumps, 1x sludge to land pump, 1x chlorine dosing systems.	Herbert Bickley had 48 power outages which lasted 169 hours Diesel used was 3840L	Anaerobic digesters cracked concrete structures, Biofilter 1 and 2 have cracked concrete structures,	4 out of 8 digesters not in use due to blockages and leaking digester pipes	No veldfires occurred during Q1.	Sludge used for irrigation 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
<b>Tsa</b>	Plant compliance	Sufficient	Sufficient	Minimal incoming	Plant received	14 critical equipment	Tsakan had 76	Digesters and	N/A	No veldfire	Sludge pumped	Unlined	None (There	None	Screenings and grit	None	Potable 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
	Compliance for Q1 is 78%.	Plant operated at 79% of hydraulic capacity.	Plant operated at 66% of organic capacity.	flow was experienced at the plant due to equipment breakdowns and spillages at Reticulation pump stations (Rockville Extension 11 and 22)	High COD industrial effluent on 09 days.	Equipment failures occurred in Q1, namely; 3x RAS pump no.1 blockage, 2x Chlorine system, 2x Generator, 1x Mechanical fine screen, 1x Circuit aerator no.8, 1xAerator no.8, 2xCompressor no.1, 1xFloating aerator no.10, 1xPhase loss on all plant equipment, 2x2 anaerobic mixers.	Power outages which lasted 222 hours. Diesel used was 9780L. 1 x Backup generator available.	channel for raw sewage feeding HYBACS concrete structures cracked and leaking		fires occurred during Q1	to unlined lagoons/paddies for solar drying. Drying beds have been decommissioned	sludge lagoons and paddies/lack of ground water monitoring at the sludge lagoons and paddies. Unfenced drying paddies	's a dolomitic report that shows none at Tsakane)		collected by CoE to a dedicated landfill site		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
Carl Grundlingh	Plant Complied with WUL effluent standards (96%) Q1	Plant operated at 65% of its hydraulic capacity	Plant operated at 27% of organic capacity,	None	No Pollution	2 x Critical equipment failures for Q1 (1xBrush Aerator & 1xFloating Aerator)	None	None	N/A	No veldfires occurred during Q1	Land application of sludge is being used	Unlined sludge to land posing groundwater 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 (96%)Q1	Plant operated at 115% of its hydraulic capacity	Plant operated at 37% of organic capacity,	Experienced low inflows due to blocked manholes between extension 7&8 on 21-25 July 2022 and high inflows after unblocking of the manholes	None	8x Critical equipment failures forQ1: Shaft mixer no 6,Inlet composite sampler, x2 dropout fuse, x2motor screen screw conveyor, generator service, mini substation	Ratanda had 3 power outages with a total duration of 27 hours in Q1	Drying beds drainage system and chlorine contact tanks are badly leaking structures	N/A	Ratanda WCW experienced veld fires on 23 July 2022, Lesedi fire department contacted to extinguish the fire none of the equipment's were damaged	Dried sludge is stockpiled on-site, potential groundwater pollution	Unlined sludge ponds and leaking drying beds, potential ground water pollution	None	None	Screenings and grit generated at the plant are still being buried and this practice is not environmentally friendly. Potential groundwater pollution	The access road to Ratanda Works is severely damaged and a new-tarred road is required urgently	No link to the Municipal Potable Water Supply, water transported from Heidelberg Works and borehole water is used for other domestic purposes

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
<b>Dekema</b>	Plant did not comply with WUL effluent standard Average compliance: 64% Q1  Compliant Parameters-  Physical – 75%  Chemical: 38%  Micro: 78%	Plant operated at 65% of hydraulic capacity	Sufficient capacity. Plant operated at 76% organic capacity	Plant received high flows on 0 out of 92 days	Plant received high COD industrial effluent on 8 of 92 days (5 days NH3 and 3 days COD).	2 Critical equipment failures occurred in Q1– Namely:  1 x Generator Changeover switch.  1 x Power outage at Section 2 electric panel  2 x Mechanical screen.	53 Outages occur (275 hrs total) Load shedding is a big concern.	Channels feeding sections partially collapsed . Biofilters and digesters wall are cracked.	1 out of 12 Anaerobic digesters is blocked	No veld fires occurred during Q1	Sludge pumped to unlined paddies for solar drying and dried sludge spread to land area to be ploughed into land.	Unlawful disposal of grit and screenings (grit and screenings are 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	The access road to Dekema WCW needs to be tarred as it gets muddy and slippery during rainy season.	N/A
<b>Rondebult</b>	Plant did not comply with WUL effluent standard Average compliance: 87% Q1  Compliant	Plant operated at 49% of hydraulic capacity	Exceeded organic capacity. Plant operated at 106% organic capacity	Plant received high flows on 0 out of 91 days	Plant received high COD industrial effluent on 10 of 91 days	0 Critical equipment failures occurred in Q1 –  Other less critical:  2 X PST motors,1	47 Outages occur (155hrs total) Load shedding is a big	Channels feeding sections partially collapsed . Biofilters and digesters	1 out of 12 Anaerobic digesters is blocked	No veld fires occurred during Q4	Sludge pumped to unlined paddies for solar drying and dried sludge spread	Unlawful disposal of grit and screenings (grit and screenings)	None	N/A	Screenings and grit generated at the plant are still being buried and this practice is not environmental friendly. Potential	The access road to Dekema WCW needs to be tarred as it gets muddy and	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 – 95.68%  Chemical: 75.15  Micro: 90.29%				and NH3 on 1 of 91 days	x HT 11 rotating bridge, 3 x submersible pump, 1 x crew conveyor cover,  1 x wash water pump, 2 x sludge pumps, 1 x filter pump, 1 x Substation 1 circuit breaker and busbar	concern .	wall are cracked.			to land area to be ploughed into land.	ings are buried on-site in a trench)			groundwater pollution	slippery during rainy season.	
<b>Vlakplaats</b>	Plant did not comply with WUL effluent standards:  Average compliance: 29% Q1  Compliant	Plant operated at 166% of hydraulic capacity. Needs to be upgraded	Plant operated at 58% of organic capacity	High flows of up to 120 Ml/day occurred from dates due to storm water ingress. Rainfall measured	Plant received industrial high strength effluent on 1 of 91 days	8 Critical equipment failures occurred in Q3 - Namely:  1x failure of raw sludge pump	42 Outages occur (179 hours in total) Loadshedding 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	Unlined Emergency dams. Unlawful disposal of grit (grit is buried	Area around bio filters at Mod A are dolomitic	N/A	N/A	Access road to final effluent need to be tarred, can't drive on it during rainy season	

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 – 62 % Chemical: 26% Micro: 0%			at the plant was 0mm.		2 x failures of raw sludge transfer pumps. , 1 x Failure of PST mechanical screen 1x Failure of mechanical screen 1x failure of rawsludge pump 1x failure of Submersible pump 1x failure of DAF air supply valve					seasonal	on-site in a trench)					is too muddy and slippery	
Wat	WCW did not comply	Plant operated	Sufficient	Average flow of up	Plant received	90 Critical equipment	0 Hours planned	None	None	11 veld fires at	Dried sludge is	Unlined	None	N/A	Screenings and grit	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
	<p>to WUL effluent standards:</p> <p>Average compliance: 89% Q1</p> <p>Compliant Parameters-</p> <p>Physical – 100%</p> <p>Chemical: 84.79%</p> <p>Micro: 83.58%</p>	above capacity (operated at 237% capacity)	capacity Plant operated at 86% organic capacity.	to 422 Ml/day received due to developments and bypasses for upstream plants.	ed industrial high strength effluent on 0 of 91 days. Plant is receiving and treating 30 m3 of leachate daily from Enviro Serv	t failures occurred in Q1 2022 Mainly from 4 x DAF Recirculation pumps, 3 x PST and transfer pump failures, 3 x power dip cut, 4 x SSTs failures, 5 x inlet screen failures, 16 x blower failures, 1 x planned blower shut down, 1 x RAS pump, 6 x aerator failures, 2 x chlorine wash water failure, 3 x	blower outage			sludge land occurred during Q4	stockpiled on the plant. Demand for agricultural application is seasonal.	Emergency dams. Unlawful disposal of grit (grit is buried on-site in a trench)			generated at the plant are still being buried and this practice is not environmental friendly. Potential groundwater pollution		

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
						cornel pump failures, 1 x draw off pump failure, 2 x Digested pump failures, 2x Compact or											

### 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

ERWAT currently has no projects aimed at improving the Capacity of the plants due to insufficient budget. The current projects are purely for optimising the plants. Availability of budget continues to be a major challenge for the institution and the implications/consequence thereof is dire.

#### 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.

COE and ERWAT undertook a comprehensive "*Wastewater Conveyance and Treatment Systems Regionalisation and 50-year Master Plan*" that will give strategic direction for future wastewater system extensions/consolidation planning, investment and implementation for the next fifty (50) year planning horizon. The plan cover all the Water Care Works operated by ERWAT and conveyance systems within the CoE operational area with the intention to optimize existing WCW systems and wastewater conveyance systems. The proposed "*Wastewater Conveyance and Treatment Systems Regionalisation and 50-year Master Plan*", is to reduce the number of WCWs operated by ERWAT from 19 to 10. The urgent required WCW capacity upgrades to accommodate the short to medium term capacity requirements in line with the Regionalization and 50-year Master Plan is summarized below.

No	Water Care Works (WCW)	CAPEX Requirements
1	Jan Smuts	R 58 500 000,00
2	Vlakplaats	R 364 000 000,00
3	Waterval	R 3 250 000 000,00
4	Ancor	R 455 000 000,00
5	Herbert Bickley	R 325 000 000,00
6	Olifantsfontein	R 650 000 000,00
7	Welgedacht	R 780 000 000,00
8	Ratanda	R 130 000 000,00
9	Hartebeestfontein	R 494 000 000,00
10	Rondebult	-
		<b>R6 506 500 000,00</b>

##### 3.5.1.1 Ancor WCW

- a) The Ancor water care 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 above its 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.

- b) Plans are currently underway to upgrade the plant to 50 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	35 Ml/d Plant Upgrade	R 455 000 000,00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan.	The commissioning of the project is subject to the availability of funds.

### 3.5.1.2 Vlakplaats WCW

- a) Vlakplaats water care works 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 is currently operating above its 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.
- b) Plans are currently underway to upgrade and restore its original capacity of 83 Ml/d in order to enhance the treatment capacity. These upgrades will ensure that the plant meet the required standards as stipulated by the department of water and sanitation (DWS).

	PLANNED PROJECTS	BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
1	28 Ml/d Plant Upgrade	R 364 000 000,00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan.	The commissioning of the project is subject to the availability of funds.
3	Flow distribution	R 40 000 000.00	Vlakplaats flow distribution project is currently under construction phase to augment and add a peak flow balancing capacity into the plant.	The commissioning of the project is anticipated to be 2021/2022

### 3.5.1.3 Welgedacht WCW

- a) The Welgedacht water care 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 upgraded to 95 Ml/d.
- b) Plans are currently underway to upgrade the plant to 155 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	60 Ml/d Plant Upgrade	R 780 000 000,00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan.	The commissioning of the project is subject to the availability of funds.

### 3.5.1.4 Herbert Bickley WCW

- a) The Herbert Bickley water care works is situated south of Nigel town and falls within the DD5 drainage district. The original design capacity of the plant was 18.75 Mℓ/d. The plant capacity has been downgraded to 15.1 Mℓ/d.
- b) Plans are currently underway to upgrade the plant to 40.1 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	25 Mℓ/d Plant Upgrade	R 325 000 000,00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan.	The commissioning of the project is subject to the availability of funds.

### 3.5.1.5 Waterval WCW

- a) The Waterval water 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 was 155 Mℓ/d. The plant capacity has been upgraded to 170 Mℓ/d.
- b) Plans are currently underway to upgrade the plant to 420 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 250 Mℓ/d Module 5 Extension	R3 250 000 000,00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan	The commissioning of the project is subject to the availability of funds.

### **Conclusion:**

ERWAT is striving and working hard towards addressing all Mega Catalytic projects to accommodate all new developments within the City of Ekurhuleni. As per table above, the mentioned Water Care Works need 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 extend/upgrade the plant.

ERWAT is exploring opportunities to determine appropriate technology solutions for the plant capacity upgrade or retrofit projects through Expression of Interest (EOI) for the water care works that are operating above the design capacity. As funding becomes available the upgrading or retrofitting all the water care works that are operating above the design capacity shall be implemented

### 3. Financial Report

Table 5: Operational expenditure

Line item	Total Original Budget	Total Revised Budget (Applicable only after Adjustment)	Budget for Quarter	Actual for Quarter	Variance	Actual for FY (Yr to date)	Variance for year (Yr to date)
<b>Employee Related Costs - Salaries &amp; Wages</b>	485 427 553		121 356 888	96 960 917	24 395 971	96 960 917	20%
<b>Remuneration of Directors</b>	3 374 802		843 701	319 681	524 020	319 681	62%
<b>Bad Debts (Provision for Bad Debts)</b>	1 742 850		435 713	(152 794)	588 507	(152 794)	135%
<b>Depreciation</b>	102 999 602		25 749 900	25 749 900	0	25 749 900	0%
<b>Pumpstations</b>	-		-	-	-	-	
<b>Repairs and Maintenance</b>	135 315 650		33 828 913	6 012 119	27 816 794	6 012 119	82%
<b>Interest Expense</b>	41 252 448		10 313 112	6 866 042	3 447 070	6 866 042	33%
<b>Intervention Expenses</b>	-		-	-	-	-	
<b>Bulk purchases</b>	349 744 361		87 436 090	52 836 723	34 599 367	52 836 723	40%
<b>General Expenses - Other</b>	195 790 579		48 947 645	20 832 686	28 114 958	20 832 686	57%
<b>TOTAL OPERATING EXPENDITURE</b>	1 315 647 845		328 911 961	209 425 274	119 486 687	209 425 274	36%

#### Expenditure:

ERWAT has a 36% under-expenditure on its total OPEX due to the following reasons:

1. A 20% under-expenditure on employee costs due to delayed recruitment plan as per the newstructure. 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;
2. A 62% under- expenditure in directors' remuneration due to the fact that the term of the board ended during the second quarter and ERWAT has been without a board. The number of directors also decreased from 8 to 5 in prior years;
3. A 82% under-expenditure in Repairs and Maintenance due to the fact that the delay in the appointment of spares supply contracts, the finalisation of the procurement plans and the implementation of the job costing module within Solar accounting system.
4. A 33% saving in interest expense due to lower interest rates;
5. A 40% under-expenditure in bulk purchases due to the Poly electrolyte tender that has not yet been approved as planned/budgeted. Issues with supply of Ferric and Chlorine for a few months (Problems with NCP which could not produce).

Load shedding having significant impact on the electricity charges which is included in Bulk purchases (Fuel costs increased).

6. A 57% 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.

*Table 6: Capital expenditure*

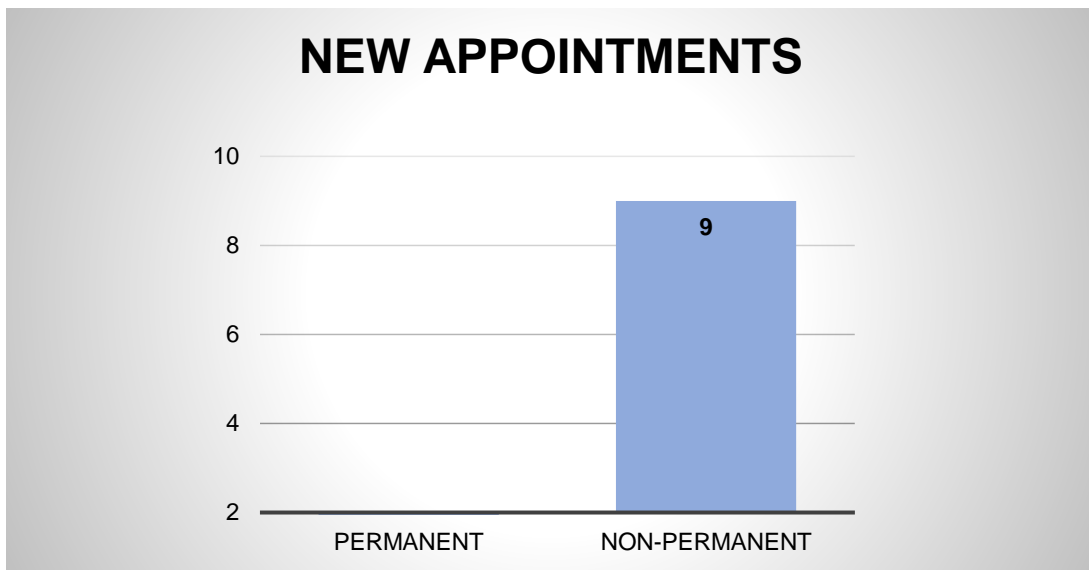
Project Detail	Total Original Budget	Total Revised Budget (applicable only after Adjustment)	Budget for Quarter	Actual for Quarter	Variance	Total Budget for the year	Actual for FY (Yr. to date)	Variance for year (Yr. to date)	% Completion
CAPITAL PROJECTS	R91, 558, 800.00	R91, 558, 800.00	R 32 045 580,00	R 33 727 814,84	R 1 ,682,234.84	R91, 558, 800.00	R33 727 814.84	R 1 ,682,234.84	36.84%

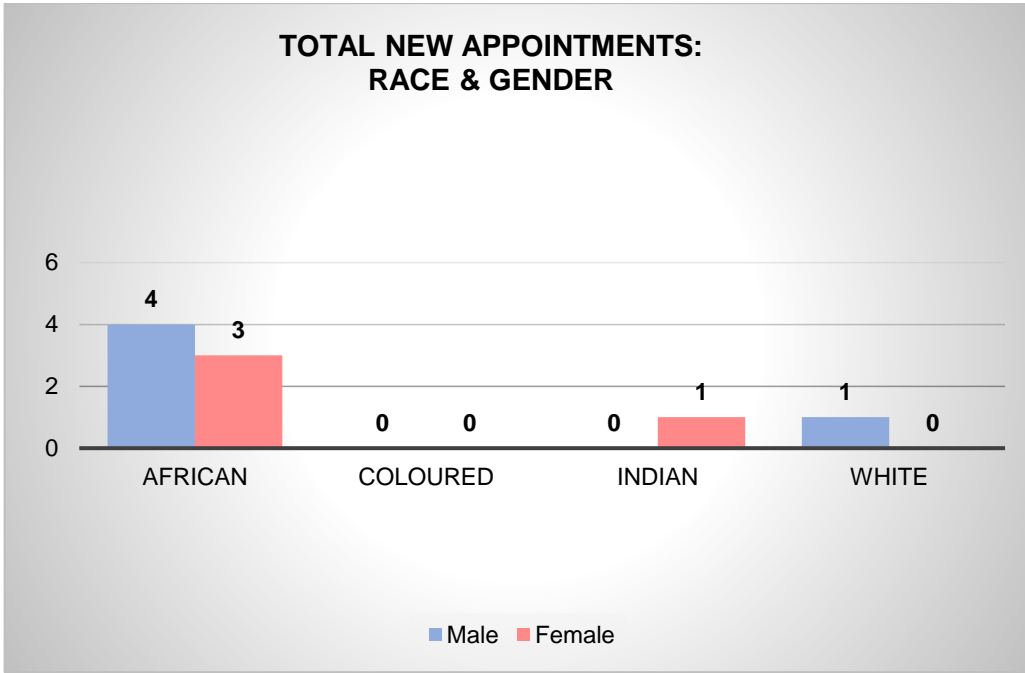
## 4. Human Resources

### 4.1 Staff Movements

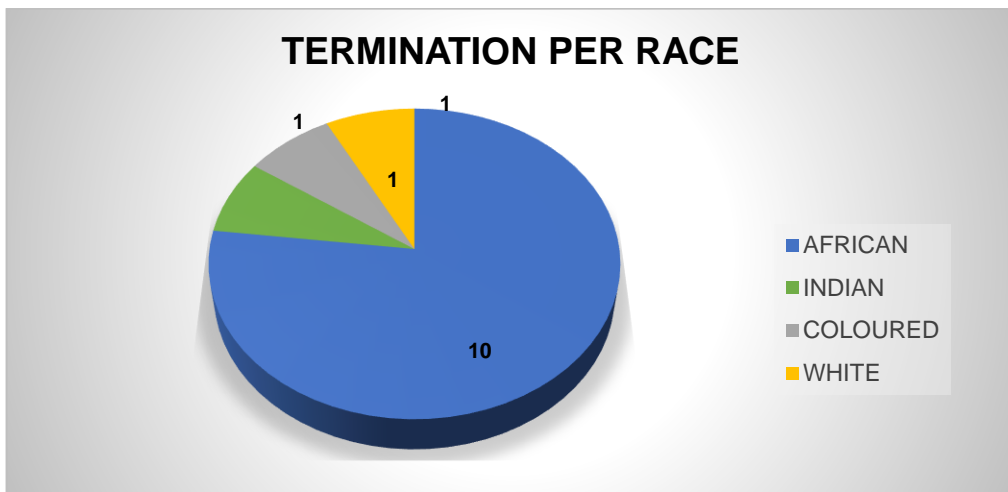
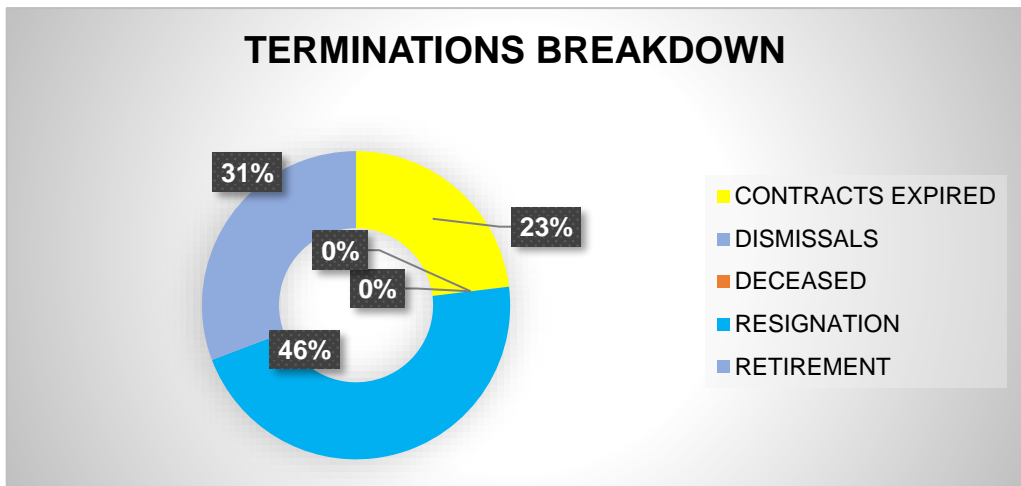
Staff Movements	African		Coloured		Indian		Whites		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
Recruitments	4	3	0	0	0	1	1	0	9
Resignations	3	1	1	0	0	0	0	1	6
Retirements	2	1	0	0	0	1	0	0	4
Contract Expired	2	1	0	0	0	0	0	0	3
Dismissals	0	0	0	0	0	0	0	0	0
Deceased	0	0	0	0	0	0	0	0	0
Promotions	0	0	0	0	0	0	0	0	0

#### 4.1.1 Appointments





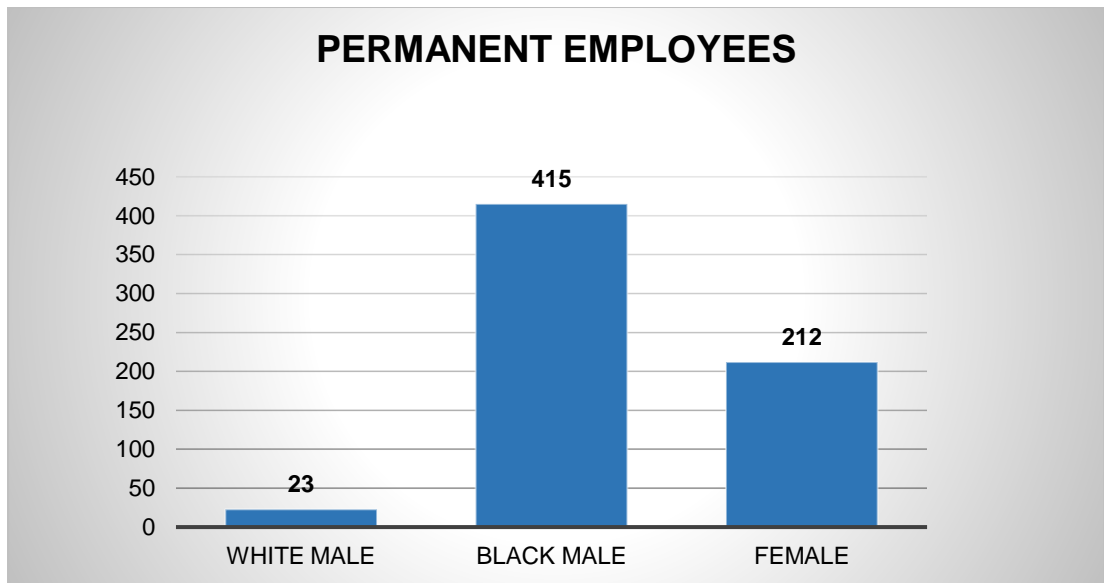
#### 4.1.2 Terminations



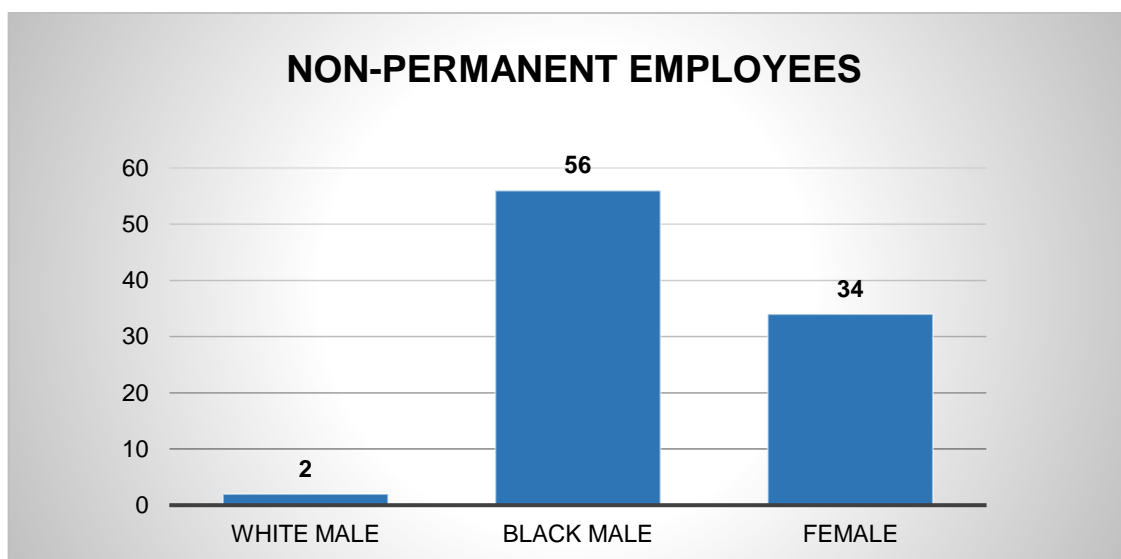
#### Status Analysis

1. During the period under review, 9 employees were appointed.
2. During the period under review, 13 employees exited the organisation for the following reasons;
  - 3 contracts expired;
  - 6 employees resigned; and
  - 4 employees went on retirement during the period under review

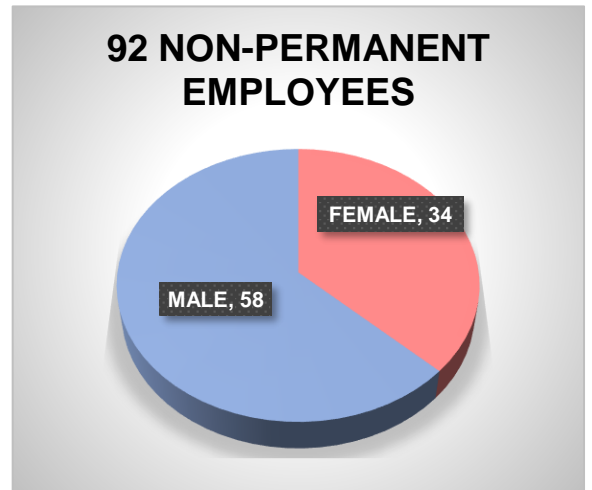
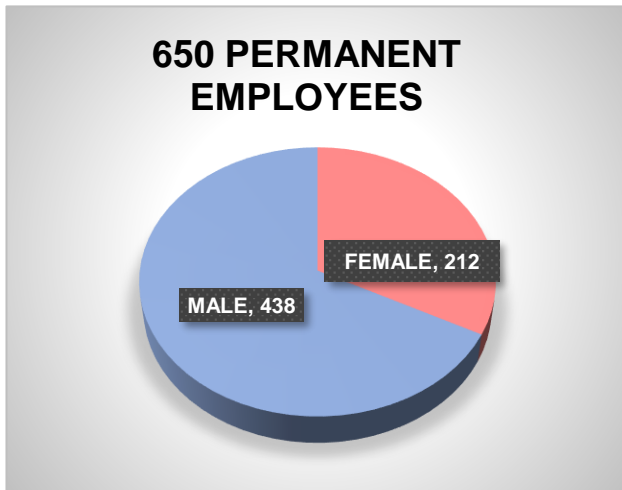
## 4.2 Employment Equity Demographics



ERWAT has **650** permanent employees.



ERWAT has **92** non-permanent employees.



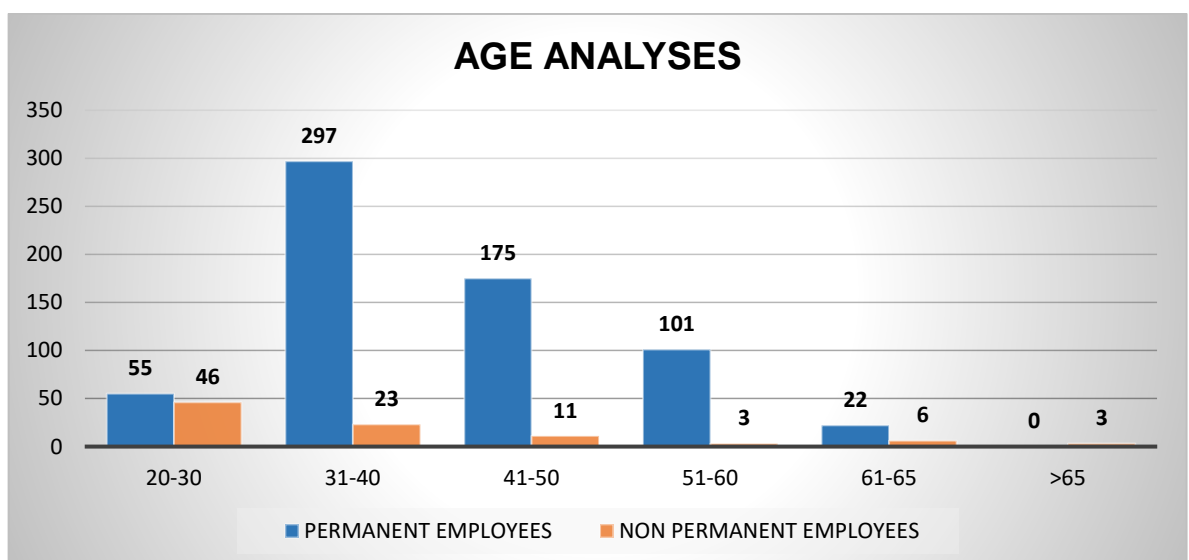
### Status Analysis

3. The employment demographics of ERWAT as at 30<sup>th</sup> September 2022 reflects:
  - Females in both permanent and non-permanent positions within ERWAT account for 246 or 33% of total positions filled.
  - Males in both permanent and non-permanent positions within ERWAT account for 496 or 67% of total positions filled.

### 4.3 Employment Equity Update

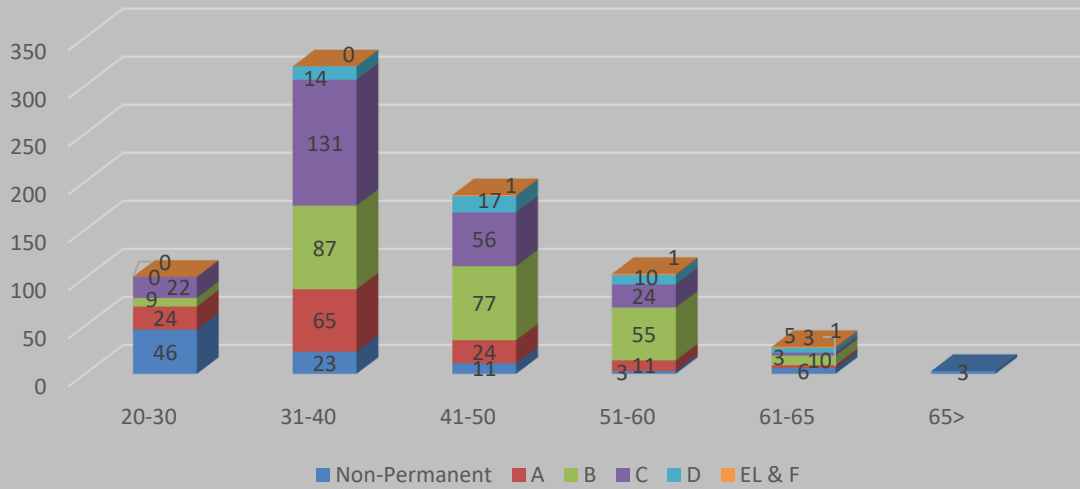
The Employment Equity Committee met on 11 August 2022 to align the Employment Equity recommendations with positions advertised at the beginning of quarter 1.

### Age Analysis

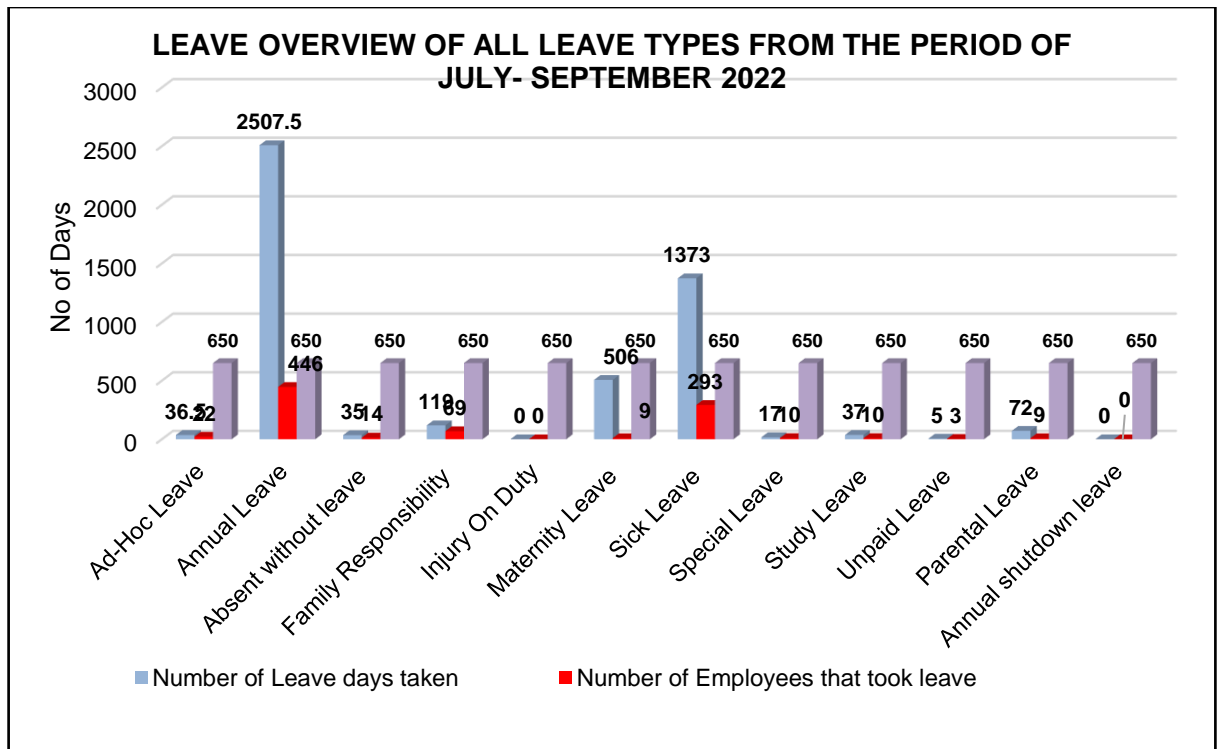


- Average age as at 09/2022 = 35

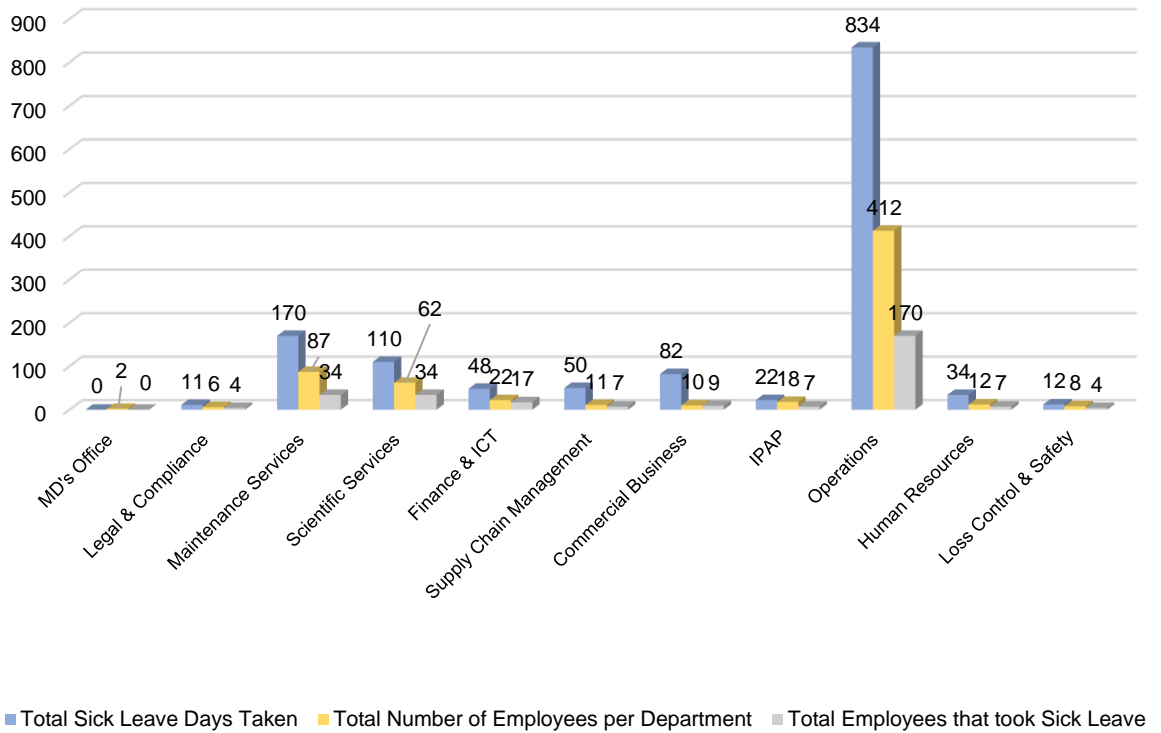
## AGE DISTRIBUTION FOR EMPLOYEES BY JOB GRADE



### 4.4 Leave Management



**TOTAL SICK LEAVE TAKEN FOR PERMANENT EMPLOYEES ONLY FROM THE PERIOD OF JULY - SEPTEMBER 2022**



**Status Analysis**

- Total number of employees who took sick leave during the period under review are 293. The total sick leave taken equates to an approximate minimum of 4.7 days per employees.

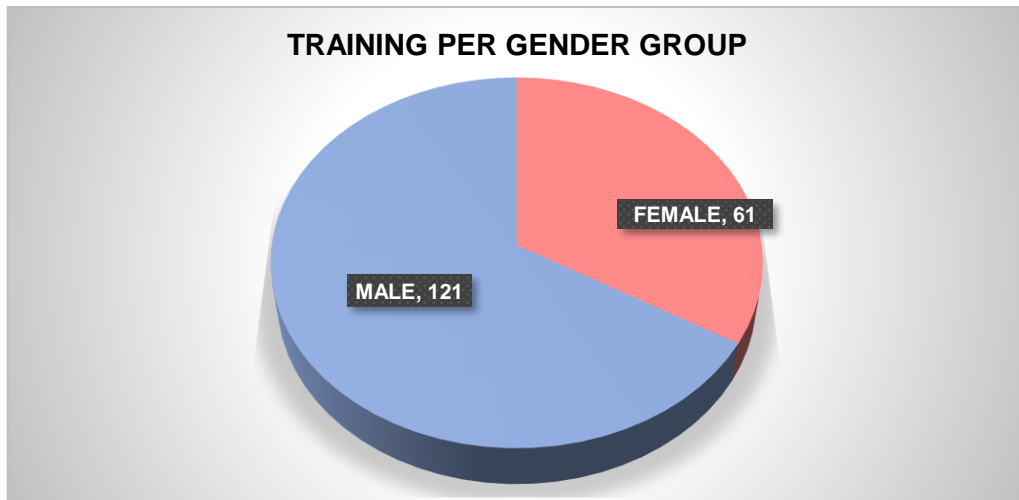
**4.5 Overtime Trends**

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Total Hours	62 512.50			
Total Cost	9 532 458.56			
Budget	10 374 757.25			

- *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 **182 employees** attending various training interventions



- a) Advanced Management Development Programme with 20 delegates at the National School of Government.
- b) Bid Committee Training, conducted by the National School of government (NSG). Completed by 13 Employees on 7 July 2022.
- c) Project Management, Conducted by the NSG. Completed by 13 Employees on 01 July 2022.
- d) 56 delegates enrolled for Learnership SAQA ID 58951: National Certificate in Water and Wastewater Treatment Process Operations: 136 Credits on Level 2, start date on 28 March 2022 currently attending theory
- e) 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, currently undergoing practical
- f) Rigging Training was conducted with 40 delegates on the 1<sup>st</sup> to 2<sup>nd</sup> September 2022
- g) First Aid Training was conducted with 30 delegates on the 5 to 9 September 2022

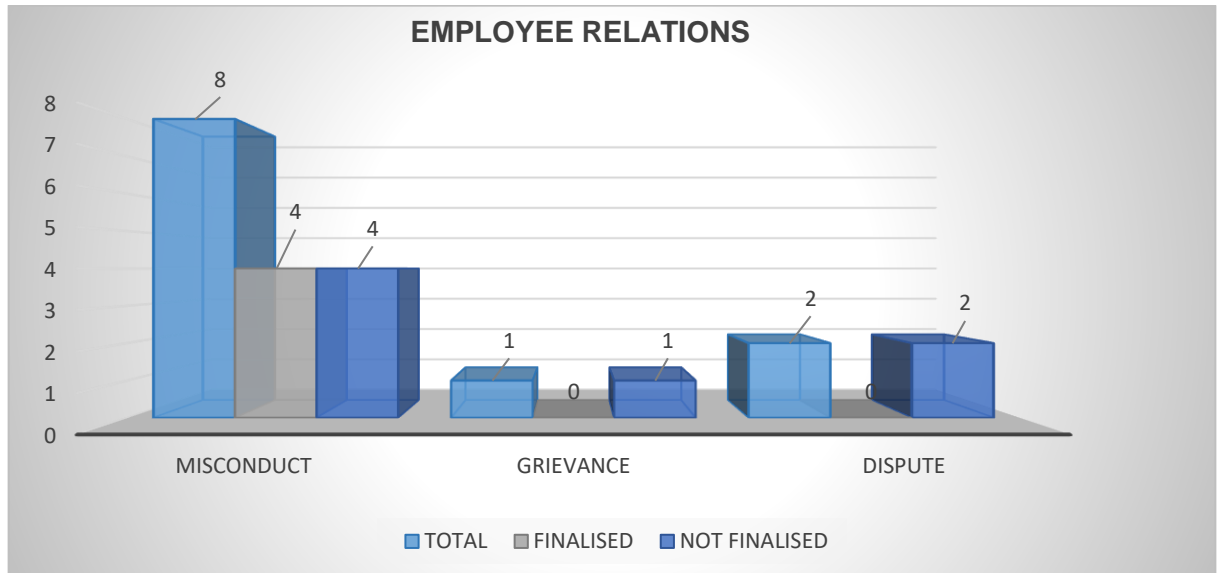
## 4.7 Performance Management

### Status Analysis

Quarter 4 (year-end) evaluations will be conducted for all employees (permanent and non-permanent) during Quarter 3 of the 2022/2023 financial year.

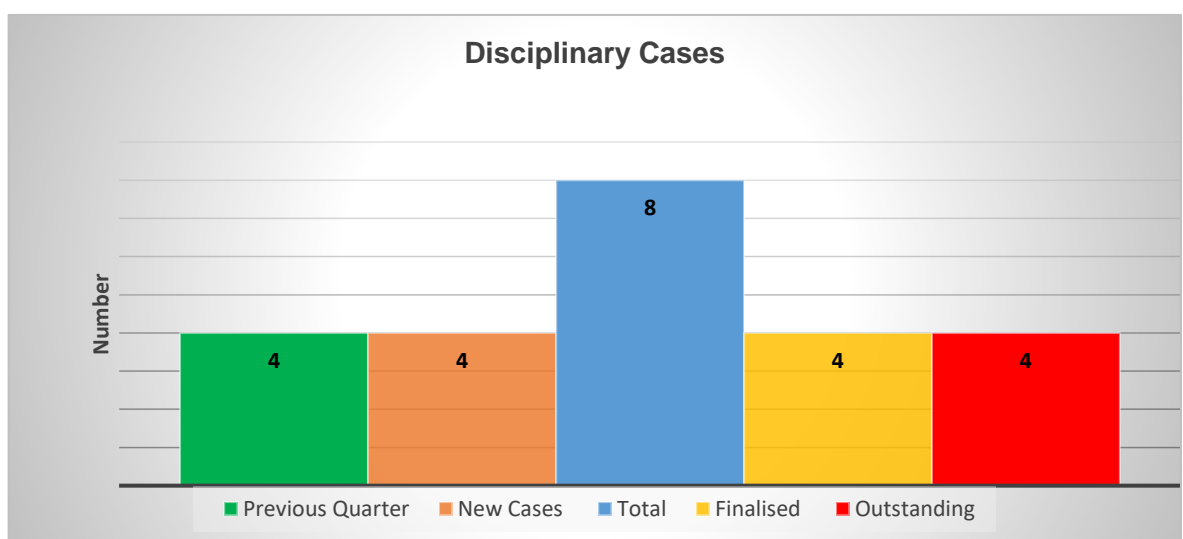
## 4.8 Employee Relations

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.



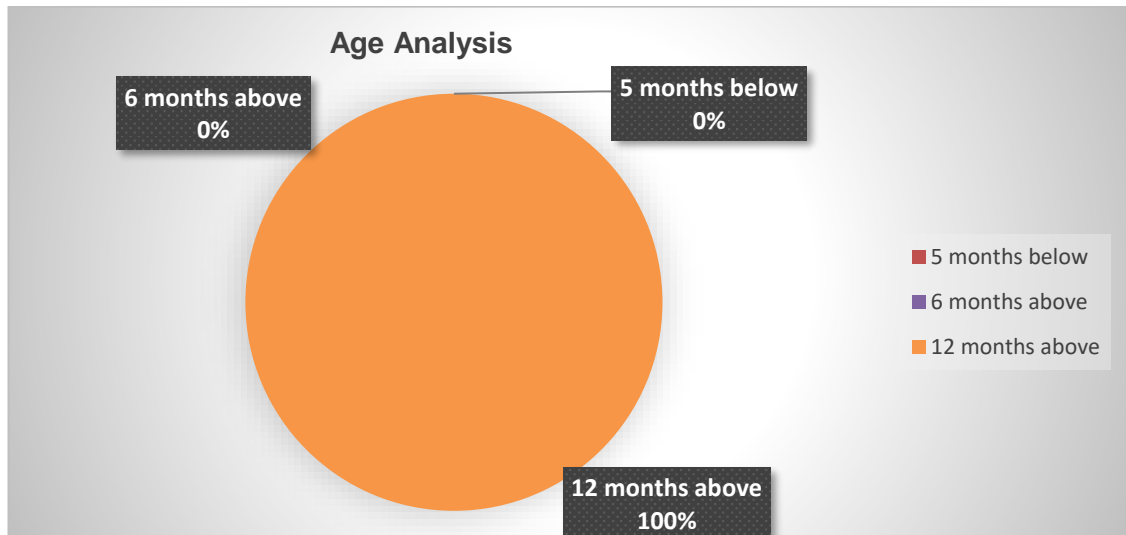
### 4.8.1. Disciplinary Cases

- Four (4) cases were not concluded in the previous quarter hence brought forward.
- Four new cases were received; the total for all disciplinary cases is eight (8). Total cases finalized is four (4) with a remaining balance of four (4) cases outstanding.



#### 4.8.2. Age Analysis of Disciplinary cases

- The age analysis of the four (4) cases outstanding, 0% are below five (5) months, 0% above four (4) months and 100% are above twelve (12) months old.

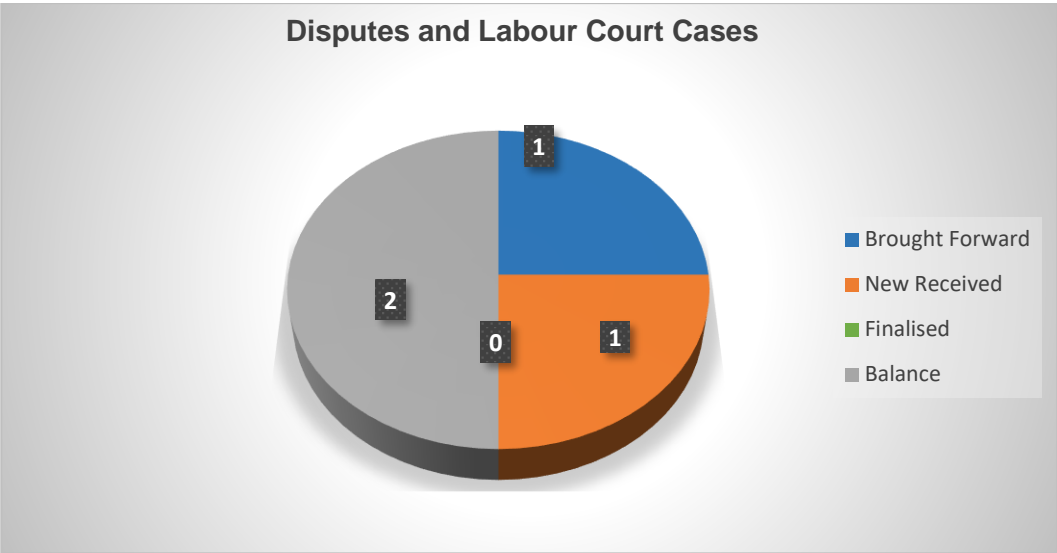


The age analysis of the four (4) outstanding cases is as follows:

- Cases that are three (3) months old =0
- Cases that are more than twelve (12) months old=4

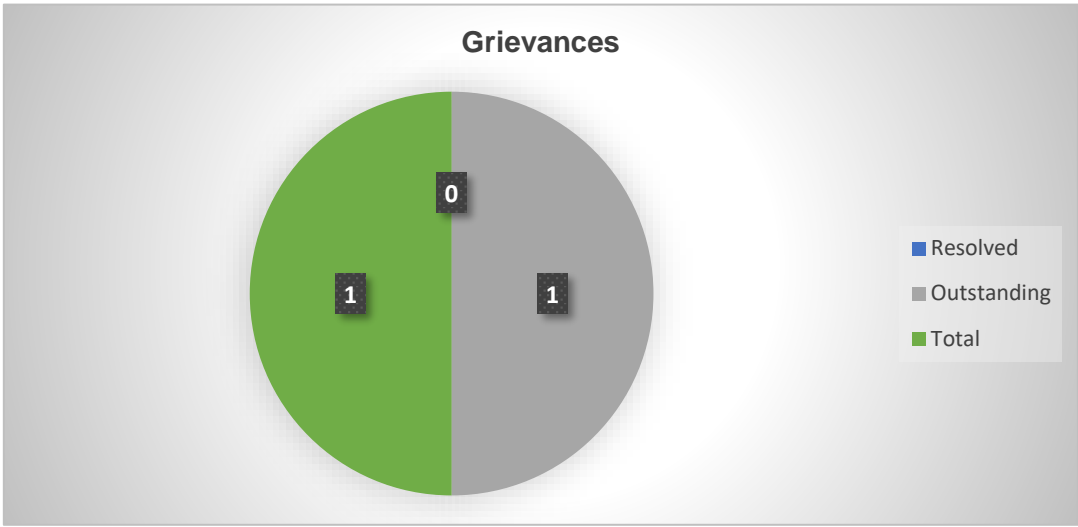
#### 4.8.3. Disputes, Arbitrations & Labour Court Cases

- Total cases brought forward One (1) as at end of previous quarter.
- One new case was received
- No case has been finalised
- In respect of disputes at the bargaining Council and Labour Court cases, ERWAT is sitting at two (2) cases
- 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 Q1, with two (2) cases still pending*

**4.8.4. Grievances**



*Total grievances outstanding is one (1).*

**4.8.5. Suspensions**

There are no suspensions for the period under review.

## 4.9 Employee Wellness Programme & OHS

ERWAT Occupational Health Services offers Wellness Programme as follows:

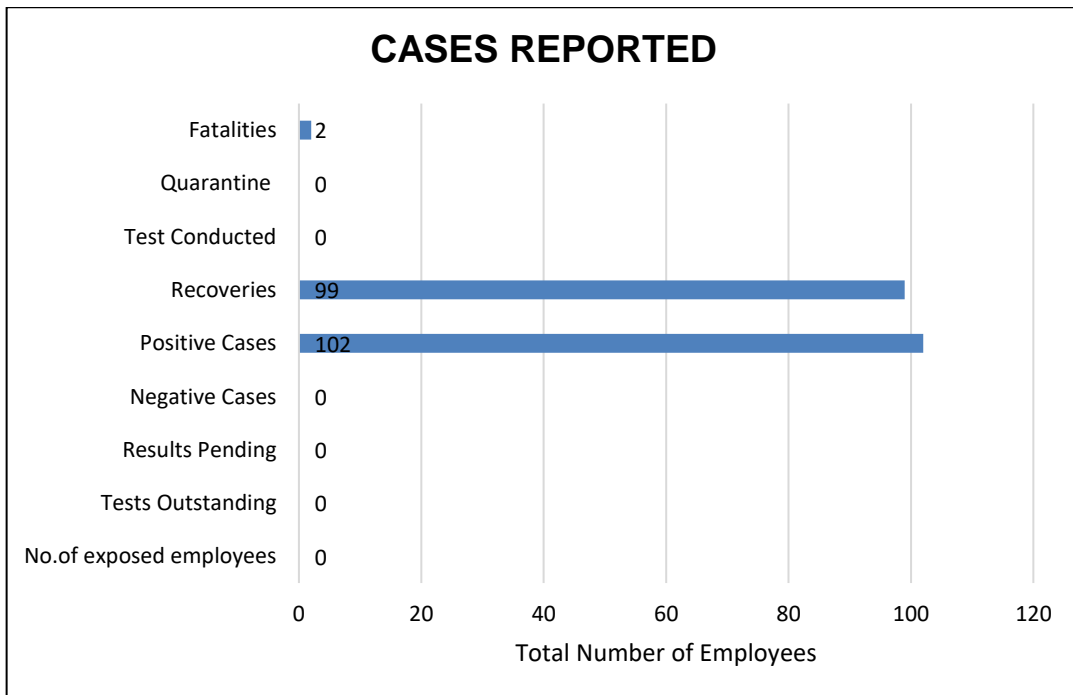
1. ERWAT has 47 Wellness Champions (WC) that are placed on all 19 Plants including the Laboratory and Head Office. During the period under review, no workshops were conducted, due to the COVID-19 pandemic.
2. The core function of the WC is to assist the Occupational Health Nurse, in identifying any health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

During the period under review:

3. 3 exit medical examinations were conducted for employees;
4. 16 Health and Safety meetings were held and attended by all districts;
5. 8 employees received Psychotherapy counselling sessions offered by ERWAT Occupational Health Services;
6. 8 first aid boxes were inspected and refilled in July & September 2022, with few to be done in October 2022 from DD3, to have complete consolidated number within the organisation.

### 4.9.1 COVID-19 Statistics

The statistics below are Consolidated COVID -19 stats reported for the period ending the 30/09/2022



#### 4.10 Percentage of Salary to OPEX.

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	YTD - Actual
Total Manpower Cost	97 280 598,00				97 280 598,00
Total Operational Expenditure	204 503 491,45				204 503 491,45
<b>% of Salary to OPEX</b>	<b>48%</b>				<b>48%</b>

## 5. Procurement Practices, Job Creation and Mainstreaming

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

### INFORMATION REGARDING BIDS FOR THE PERIOD ENDED 30 SEPTEMBER 2022

CATEGORY	YEAR TO DATE TOTAL	% OF YEAR TO DATE TOTAL
0% HDI / JURISTIC PERSON	R4 200 000.00	9%
1-50% HDI	R1 500 000.00	3%
51-99% HDI	R5 366 000.00	11%
100% HDI	R36 400 000.00	77%
<b>TOTAL</b>	<b>R47 466 000.00</b>	<b>100%</b>
<b>SIZE OF COMPANY</b>		
LARGE	R5 700 000.00	12%
MEDIUM	R30 000 000.00	63%
SMALL	R11 766 000.00	25%
MICRO	-	0%
<b>TOTAL</b>	<b>R47 466 000.00</b>	<b>100%</b>
<b>AWARDS MADE TO:</b>		
FEMALES	-	-
BLACK FEMALE 30-100%	R4 770 000.00	-
HDI 50-99%	R8 366 000.00	-
100% HDI	R30 400 000.00	-
MILITARY VETERANS	-	-
PWD	-	-
YOUTH	-	-
<b>BBEEE SCORE CARD</b>		
EME	R11 766 000.00	25%
QSE	R30 000 000.00	63%
GENERIC	R5 700 000.00	12%
<b>TOTAL</b>	<b>R47 466 000.00</b>	<b>100%</b>
<b>AWARD MADE TO</b>		
COE BASED COMPANIES	R30 400 000.00	64%
NON COE BASED	R17 066 000.00	36%
	<b>R47 466 000.00</b>	<b>100%</b>

## 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 in that all material risks and business plans have been duly considered, addressed by management. Risk Management has become an integral part of strategy setting, forming part of senior management's Key Performance Areas.

#### **ERW1. Inadequate integrated planning between the City and the Entity**

An integrated approach is key to ensuring that there is adequate capital injection in order to be able to achieve the entity's infrastructure requirements as set out in the 50 year Master Plan that will eventually increase the operational capacity. This can be realised by the entity being part of the City's Capital Investment Forum to benefit from the full value chain of planning.

#### **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 water care works are both hydraulically and organically overloaded threatening future growth of the City and receiving environment. Conditions that contribute to these threats are aged treatment infrastructure without water flow diversion capabilities and no emergency dams that can act as mitigation.

#### **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 imports some of the equipment and consumables that is critical in testing water for the City, the entity and customers. There are long lead times 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. The

**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 strive to fully comply with the requirements of Occupational Health and Safety Act by providing a safe working environment. Inadequate maintenance of equipment poses a safety risk to employees.

**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		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
ERW1	<b>Inadequate Integrated planning between the City and the Entity</b>	CF 1.1	Inadequate communication and coordination between ERWAT and City departments (City planning, Water & Sanitation, waste storm cluster)	CC1.1	Service delivery Agreement	Medium	RAP 1.1	Addendum to the SDA <b>(2021/22)</b> Final review of the Service Delivery Agreement and table at the relevant committee for approval	The Addendum was tabled at the Board on the 18 <sup>th</sup> of August 2022. Annexures/Tariff Schedule still need to be updated.
		CF 1.2	Lack of participation in some of the forums established by the City.(e.g. Capital Investment Forum where decisions are taken)	CC1.2	MMC Senior Management Quarterly Meetings		RAP 1.2	Identify City's forums that are relevant to ERWAT, and formally request to be included as a permanent invitees. (Capital Investment Forum)	Request letter submitted to City Planning for ERWAT to be invited to their Capital Investment Framework meetings that sit annually
				CC1.3	Participation at Technical Cluster Meetings				
				CC1.4	CoE Corporate Governance Framework				
ERW2	<b>Inadequate Infrastructure to treat wastewater</b>	CF 2.1	a) Outdated, aging and inadequate infrastructure to treat high strength industrial effluent due to lack of budget to implement capacity related projects. <b>Current Capacity</b> (14 WCWs operating above 100% capacity, 3WCWs operating at 80+ to 100% and only 2	CC2.1.1	Development & Engineering Contribution Policy	High	RAP 2.1.1	Investigate other potential sources of funding for the upgrading of infrastructure (to increase capacity (e.g. PPP etc.)	A report on Public Private Partnerships was submitted to the Board and approved on the 18 <sup>th</sup> August 2022. Furthermore the report was referred to the City Manager's workgroup by the Technical cluster. Outcome of the meeting will be reported in Q2
				CC2.1.2	50-Year Master Plan (Facilities Development Plan)		RAP 2.1.2	No further action plan to be implemented. There is an urgent need to implement capacity related projects however there is no budget.	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors		Current Mitigation Controls	RR	Risk Action Plan 2022/2023	Detailed Progress
		WCWs operating below 80%)					
		b) Outdated, aging and inadequate technology to treat high strength industrial effluent due to lack of budget to implement newer technologies .	CC2.1 .3	Wastewater Risk Abatement Plans		RAP 2.1. 3 Implementation the MTREF 2022-2023 CAPEX Plan Project 1 Olifantsfontein Intervention Project	CAPEX Target - R32 045 580,00 (35%) Actual Target - R33 727 814 ,84 (36.84) Phase 1a and 1b The commissioning of two phase has been completed and handover to Operation Department on the 8th June 2022. Phase 1c and 1d The project are still in procurement stage awaiting the budget availability. Project awaiting budget adjustment
	CC2.1 .4		Wastewater Research and Development Program		RAP 2.1. 4 Organic testing of industrial effluent	Organic profiling has been completed on 440 industrial source scans (268 for North East Region Sources and 172 for South West Region Sources). The information linked to the top 30 identified pollution sources to the associated WCW's.	
	CC2.1 .5		CoE Schedule A Bylaws Analysis of samples by ERWAT		RAP 2.1. 5 No further risk action plan to be implemented	There will be no reporting for the year under review.	
	CC2.1 .6		Incident management protocol (IMP) .		RAP 2.1. 6 Tracking of incidents and on a quarterly to assist in planning to build operational resilience	279 critical equipment breakdown were recorded due to loadshedding. Shortage of Ferric chloride was recorded for 11 WCW due to a national shortage	

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
		CF 2.2	Inadequate implementation of maintenance plans leading unavailability of equipment	CC2.2 .1	Asset Management Policy & Asset Management Strategy		RAP 2.2.1	Review the Asset Management Policy and Strategy	Asset Management Policy is being reviewed and will serve at the next board meeting in November 2022.
				CC2.2 .2	Asset Management Care Plans, limited available budget		RAP 2.2.2	Implementation of Maintenance Plan 2022/2023	Target R33 828 912,50 Achieved R6 012 118, 58 – There were delays in the appointment of spares supply contracts Remedial - Department in the process of appointing a service providers
				CC2.2 .3	Equipment Operating Manuals		RAP 2.2.3	No further risk action plan to be implemented	There will be no reporting for the year under review.
		CF 2.3	Inadequate budget allocation to maintain infrastructure	CC2.3 .1	Maintenance budget		RAP 2.3.1	Implementation of the 2022/2023 Maintenance Plan	Target R33 828 912,50 Achieved R6 012 118, 58 – There were delays in the appointment of spares supply contracts Remedial - Department in the process of appointing a service providers
		CF 2.4	Delays in bringing back equipment's and services due to long lead time of spares of spares sourced overseas and inadequate service master contracts	CC2.4 .1	Maintenance Service contract		RAP 2.4.1	Expand the pool of Service Master Contracts established in the 2021/2022 FY for critical equipment both electrical and mechanical	Action completed. Service Master Contracts are in place for Electrical, Mechanical and instrumentation. Contracts are acquired as and when the need arise.
				CC2.4 .2	ERWAT Procurement Plan				
		CF 2.5	Storm water ingress (be incorporated into he CoE register)	CC2.5 .1	No current control		RAP 2.5.1	No further risk action plan to be implemented	There will be no reporting for the year under review.
		CF 2.6	Rapid population and industrial growth within CoE	CC2.6 .1	50 Year Master Plan		RAP 2.6.1	No further risk action plan to be implemented	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
ERW3	Inadequate Cash flows to meet business requirements	CF 3.1	Lack of a consolidated cash-flow forecast based on actual departmental requirements	CC3.1	Cash-flow projections are created based on assumptions of a uniform monthly expenditure	High	RAP 3.1	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. The last Board meeting was in August 2022.
		CF 3.2	Unforeseen increases in overhead costs such as labour costs, overtime and increase to the pay scales, etc.	CC3.2 .1	Overtime Policy		RAP 3.3.1	No further risk action plan to be implemented	There will be no reporting for the year under review.
				CC3.2 .2	Leave Encashment (Leave Policy)				
				CC3.2 .3	Remuneration Policy				
				CC3.2 .4	Monitoring of actual expenditure against approved budget and taking conservative approach to cash flows management				
		CF 3.3	Inadequate budgetary increases granted by the CoE due to economic pressures (Historic and Current)	CC3.3	Budget deficiency Formal Communicating to all stakeholders not receiving adequate funds to discharge its mandate and	RAP 3.3.1	Investigate other sources of funding.(e.g. PPP)	A report on Public Private Partnerships was submitted to the Board and City 's Technical Cluster for Council approval. The report was tabled at Board meeting on the 18th of August 2022 for board approval.	
		CF 3.4	Available funds not prioritised in order of its most effective use.	CC3.4 .1	Cost Containment Policy	RAP 3.3.2	Update the Financial Model and determine Cost Reflective Tariff in order to motivate for additional funding.	An Accountant appointed on the 1 <sup>st</sup> of October 2022 and will be responsible for the updating of the Financial Model.	
RAP 3.4.1	Development and Implementation of a cost containment strategy					Progress to be reported in quarter 2			
					Medium				

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
		CF 3.5	Significant loan repayments resulting in cash-flow shortages	CC3.5 .1	Cash-flow management by arrangement of partial payment with suppliers in order to stretch available funds.	High	RAP 3.5.1	Review of Credit Management Policy to incorporate charging of interest.	Action plan completed.
		CF 4.6	Inadequate measures for granting credit and revenue collection	CC4.6 .1	Credit Collection and Debt Management policy		RAP 3.6.1	Appointment of credit vetting agency	Progress to be reported in quarter 2
		CF 3.7	Delayed settlement of invoices raised by ERWAT for payment by the CoE in relation to service charges and CAPEX grants	CC3.7 .1	Credit & Debt Management Policy		RAP 3.7.1	Review of the SDA to include processes for to address late payment of invoices.	Progress to be reported in quarter 2
		CF 3.8	Unilateral budget cuts imposed on ERWAT by CoE Water and Sanitation department.	CC3.8 .1	MTREF Budget 2021-2023		RAP 3.8.1	No further risk action plan to be implemented	There will be no reporting for the year under review.
ERW4	Inadequate revenue generation to supplement the approved budget	CF 4.1	Inability to secure new business due to overhead costs that are higher than that of competitors.(such as Manpower, laboratory, etc.)	CC4.1 .1	Manpower Costing in terms of existing pay scales.	High	RAP 4.1.1	No further risk action plan to be implemented	There will be no reporting for the year under review.
				CC4.1 .2	Pricing Model. ( Scientific Services Price Schedule)		RAP 4.1.2	Review of the Pricing Model.	Awaiting the appointment of the accountant to assist with the costing model(appointment due October'2022).
				CC4.1 .3	Manually costing per project basis.		RAP 4.1.3	No further risk action plan to be implemented	There will be no reporting for the year under review.
				CC4.1 .4	Quarterly Business reviews		RAP 4.1.4	No further risk action plan to be implemented	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
		CF 4.2	Loss of existing business through insourcing and companies closing down or reducing costs	CC4.2 .1	Customer Satisfaction Survey	RR	RAP 4.2.1	Develop of Sales Strategy and market penetration plan	The tender for the market penetration plan and strategy was advertised to the market and declared a non-award.
		CF 4.3	Legislative Limitations/MFMA Section 164 Forbidden Activities.	CC4.3 .1	No current control		RAP 4.3.1	Seek Legal opinion from CoE on the interpretation of the Sec 164 Forbidden activities and the MSA	Awaiting feedback from the city's legal department.
		CF 4.4	Business requirements limiting of entry to new market (Level of BBB-EEE Compliance/Inadequate and/or no BBEE certificate)	CC4.4 .1	No current control		RAP 4.4.1	Annual review of BBB EE Compliance.	The Annual Customer Service Survey tender document was completed and approved by BSC for advertisement in the open market.
		CF 4.5	Expiry of existing customer contracts/non-renewal of expired contracts	CC4.5 .1	Customer Satisfaction Survey		RAP 4.5.1	Annual Customer Service Survey	The service provider was appointed ,currently busy concluding the verification process.
ERW5	Possible failure to achieve Capital Expenditure set target	CF 5.1	Planning, SCM processes and systems not fully integrated online	CC5.1 .1	ERWAT Infrastructure Planning & Projects Procurement Plan	Medium	RAP 5.1.1	No further mitigation to be implemented	There will be no reporting for the year under review.
				CC5.1 .2	Supply Chain Management Policy		RAP 5.1.2	No further mitigation to be implemented	There will be no reporting for the year under review.
		CF 5.2	Continuation of project (roll-over) not provided in the next financial year (vote not created).	CC5.2 .1	Annual CAPEX Plan with projected cash flows for each project		RAP 5.2.1	No further mitigation to be implemented	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors	Current Mitigation Controls	RR	Risk Action Plan 2022/2023	Detailed Progress
		CF 5.3 Delays in Supply Chain Management processes. (Including the effect of the Pandemic)	CC5.3 .1 Supply Chain Management Committees appointed with weekly meetings to speed up SCM processes		RAP 5.3.1 No further mitigation to be implemented	There will be no reporting for the year under review.
			CC5.3 .2 Bid Committees tracking register implemented.		RAP 5.3.2 No further mitigation to be implemented	There will be no reporting for the year under review.
		CF 5.4 Late payment of contractors due to USDG Invoices being paid late	CC5.4 .1 Creditors Policy		RAP 5.4.1 No further mitigation to be implemented	There will be no reporting for the year under review.
		CF 5.5 Members of the community and the local business forums demanding to be sub-contracted in the project.	CC5.5 .1 Community Liaison Officer Appointed through ward councillors to assist with community engagement.		RAP 5.5.1 Engage CSR office prior to commencement of construction project. (CSR plan to include Projects)	There were no new projects in quarter 1
			CC5.5 .2 Sub-contracting to local business on projects that requires less technical skills.		RAP 5.5.2 No further mitigation to be implemented	There will be no reporting for the year under review.
		CF 5.6 Potential disruptions such as Contractor employees going on strike and/or any other disruption caused by contractor	CC5.6 .1 Invoke penalties for poor performance in line with the Supply Chain Management Policy and related Service Level Agreements		RAP 5.6.1 No further mitigation to be implemented	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
		CF 5.7	Denial of contractor's access to ERWAT sites due to labour unrest	CC5.7 .1	Disciplinary Procedure		RAP 5.7.1	Disciplinary processes to be taken for illegal strikes as and when they arise	There were no illegal strikes in quarter 1.
		CF 5.8	Denial of contractor's access to ERWAT sites due to community unrest	CC5.8 .1	Business Continuity Management Policy		RAP 5.8.1	Review the Business Continuity Policy	The BCM Policy reviewed
		CF 5.10	Termination of contract due to poor performance of the contractor and Unexpected withdrawal from projects by the contractor.	CC5.1 0.1	Service Level Agreement		RAP 5.1 0.1	No further action plan identified	There will be no reporting for the year 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	CC6.1 .1	Water Bypass System for some Wastewater Care Works and emergency dams		RAP 6.1.1	No further mitigation identified	There will be no reporting for the year under review.
		CF 6.2	Some of the Infrastructure built on dolomitic areas	CC6.2 .1	Geo tech studies conducted (every three years)		RAP 6.2.1	Benchmarking of ERWAT's Geotechnical Standard Operating Procedure with CoE.	Progress to be reported in quarter 2
		CF 6.3	Inadequate Business Continuity Management Program	CC6.3 .1	Business Continuity Management Policy		RAP 6.3.1	Review Business Continuity Management Policy	Action plan completed. The BCM Policy was approved by the Board on 18th of August 2022
						High	Enter into a formal Agreement between ERWAT and Lesedi Municipality	A Memorandum of Agreement drafted between Lesedi and ERWAT. Departments still to give inputs	

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
				CC6.3 .2	Incident Management Protocol (Emergency Response Plan)	RR	RAP 6.3. 2	Tracking of incidents and on a quarterly to assist in planning to build operational resilience	279 critical equipment breakdown were recorded due to loadshedding. Shortage of Ferric chloride was recorded for 11 WCW. This is due to a national shortage
				CC6.3 .3	Business Continuity Management Risk Assessments for Water Care Works and Support Services		RAP 6.3. 3	No further action plan to be implemented	There will be no reporting for the year under review.
				CC6.3 .4	BCM Business Impact Analysis		RAP 6.3. 4	No further action plan to be implemented	There will be no reporting for the year under review.
				CC6.3 .5	Critical Supplies Register		RAP 6.3. 5	Update the Critical Supplies Register	Progress to be reported in quarter 2
				CC6.3 .6	Business Recovery Plans		RAP 6.3. 6	Testing of 3 Business Recovery Plans	Progress to be reported in quarter 3
				CC6.3 .7	BCM Steering Committee		RAP 6.3. 7	BCM Communications and Awareness	Progress to be reported in quarter 2
				CC6.3 .8	BCM Infrastructure Condition Assessments		RAP 6.3. 8	Request the city's Dolomite Division to assist in Conducting Dolomite Hazard Risk Assessment, in line with the CSIR requirements	Progress to be reported in quarter 3
				CC6.3 .9	ICT Disaster Recovery Plan		RAP 6.3. 9	No further action plan to be implemented	There will be no reporting for the year under review.
ERW7	Potential loss of key skills	CF 7. 1	Unexpected loss of key employees due to the resignation, death(	CC7.1 .1	Recruitment Policy	Medium	RAP 7.1. 1	'No further action plan to be implemented	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
			Natural/ COVID-19), etc	CC7.1 .2	ERWAT Recruitment Plan		RAP 7.1.2	Implementation of 2022/23 recruitment plan	Progress to be reported in quarter 2
				CC7.1 .3	Competency Based Progression Plan		RAP 7.1.3	No further risk action plan to be implemented	There will be no reporting for the year under review.
				CC7.1 .4	Skills Audit		RAP 7.1.4	Finalise the Workskills Capacity Exercise	To commence in Quarter 2
				CC7.1 .5	Covid 19 Policy		RAP 7.1.5	Review the COVID-19 Policy	Progress to be reported in quarter 3. Policy to be revised and amended as a Dreaded Disease Policy to be submitted in Quarter 3 to Board for approval.
				CC7.1 .6	Covid 19 Standard Operating Procedure		RAP 7.1.6	No further action plan to be implemented	There will be no reporting for the year under review.
				CC7.1 .7	Covid 19 Risk Assessment		RAP 7.1.7	Conduct COVID-19 Personnel Risk Assessment tha will inform COVID-19 Policy Stance	Action plan completed
				CC7.1 .8	6-year Training and Development Plan		RAP 7.1.8	Implementation of 2022/23 annual Training Plan	A total of 182 employees have attended various training programmes.
		CF 7.2	Dissatisfaction in the Working Environment (e.g. not fitting in with the organisation's culture and inadequate working resources)	CC7.2 .1	Employee Benefits Policies		RAP 7.2.1	Review of Human Resources Policies as and when the need arise	Tool of trade policy reviewed, to be tabled at the Remuneration Committee in October for recommendation to the board.
				CC7.2 .2	Conducted climate survey		RAP 7.2.2	No further action plan to be implemented	There will be no reporting for the year under review.
				CC7.2 .3	Psychosocial support		RAP 7.2.3	Implement Employee Support Programmes	Ongoing Counselling conducted internally by ERWAT inhouse-nurse.

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
				CC7.2 .4	Management Development Program	RR	RAP 7.2. 4	Implement the Management Development Program	First Class/Group completed Management Development Program Training in September.
		CF 7. 3	Individuals not coping with the workload pressure, expectations on individuals not met and career advancement	CC7.3 .1	Personal Development Plans		RAP 7.3. 1	Review of Personal Development Plans	Action Completed. Personal Development Plans submitted to HR.
				CC7.3 ..2	Exit Interview as and when a need arise		RAP 7.3. .2	No further action plan identified	There will be no reporting for the year under review.
ERW8	Potential delays in the supply and delivery of critical goods and services	CF 8. 1	Late commencement of bid processes by user department and non-awarded bids that need to go through a re-tendering process	CC8.1 .1	Supply Chain Management Policy	RR     high	RAP 8.1. 1	Review of the Supply Chain Management Policy	The SCM Policy was reviewed to align it with the legislative requirements and National Treasury issued Circulars and to provide for a list of commodities/services for direct purchases/payments to be implemented and approved by the Board on the 18 <sup>th</sup> of August 2022.
				CC8.1 .2	SCM Turn Around Time Procedure		RAP 8.1. 2	No further risk action plan to be implemented	There will be no reporting for the year under review.
				CC8.1 .2	ERWAT Procurement Plan		RAP 8.1. 2	Review the 2022/23 Procurement Plan for the 2023/2024 FY	Action completed. Opex and Capex Procurement Plan reviewed and tabled at Exco (13/09/2022) for approval..
				CC8.1 .2	SCM Bid Committees		RAP 8.1. 2	No further risk action plan to be implemented	There will be no reporting for the year under review.
				CC8.1 .3	SCM Document Movement Control Tracking Register implemented		RAP 8.1. 3	No further risk action plan to be implemented	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
		CF 8.2	Inadequate monitoring of contract term by the user departmet	CC8.1 .4	Contract Management Register	High	RAP 8.1.4	Review the contract Management Register	Ongoing – Updated to incorporate all the current active contracts and the spent report to date
		CF 8.3	Limitations set under the delegation of authority	CC8.1 .7	Delegation of authority		RAP 8.1.7	Review of the Delegations of Authority	Progress to be reported in quarter 2
		CF 8.4	Long lead time to deliver goods/ services due to external factors such as COVID-19, Rise in Logistics Cyber Attacks, Shortage of supplies & Consumables etc	CC8.1 .9	Critical Suppliers of Goods and Services Register		RAP 8.1.9	Review the Critical Supplies Register	Action completed. The Critical Supplier Register reviewed for continuity and contracts are in place for the majority that is on the list,
ERW9	Potential loss of the ISO 17025 Accreditation	CF 9.1	Aging instrumentation, scarcity of spares and discontinuation of instruments could result in loss of the approved testing methods impacting on service delivery both internally and externally	CC9.1 .1	Scheduled maintenance in accordance with ERWAT's Instrumentation maintenance Plan	High	RAP 9.1.1	No further action plan to be implemented	There will be no reporting for the year under review.
		CF 9.2	Lack of budget for maintenance of the Laboratoy building	CC9.1 .2	Ad-hoc minor maintenance by the Maintenance Department on a daily, weekly and monthly basis.		RAP 9.1.2	Implementation of building maintenance plans including power supply loads, building/ roof leaks, etc.	

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
		CF 9.3	Lack of control of the laboratory internal environmental temperature resulting in temperature fluctuations that are not within the required limits for the instruments to function and unsuitable temperatures for employees to work in.	CC9.1 .3	Environmental Monitoring (daily)	High	RAP 9.1.3	Install a new Heating Ventilation Air Conditioning (HVAC) system.	Ventilation systems for the laboratories has been completed. The Air Conditioning System planned completion is in Q2.
		CF 9.4	Power and water supply disruption due to loadshedding and unstable water supply	CC9.4 .1	UPS at the Laboratory on certain instruments and central generator at Head office		RAP 9.4.1	No further action plan to be implemented	There will be no reporting for the year under review.
				CC9.1 .2	Maintenance department assist with reporting power and water disruptions.		RAP 9.1.2	No further action plan to be implemented	There will be no reporting for the year under review.
				CC9.1 .3	Storage tanks for de-ionised water.		RAP 9.1.3	Review existing emergency water supply capacity	Progress to be reported in quarter 2
ERW10	Potential Loss of, and Unauthorised Access Critical Information	CF 10.1	Aging ICT infrastructure leading to higher hardware failure (40% of the Server Hardware has reached end of life support, leading to difficulties in procuring	CC10.1.1	Asset Management Policy, Strategy and Plans	High	RAP 10.1	No further action plan to be implemented	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors		Current Mitigation Controls		RR	Risk Action Plan 2022/2023		Detailed Progress
			replacement spare, warranties, etc)			High			
		CF 10.2	Inadequate of cyber security awareness and behaviour	CC10.1.2	ICT security awareness program		RAP 10.2	Develop (31 Dec 2022) and implement an ICT Cybersecurity Awareness Program	Developed an induction program to assess cyber security awareness of new ERWAT recruits
		CF 10.3	Inadequate Information Security Controls	CC10.1.3	ICT Security Policy and Procedures		RAP 10.3	Development and approval of Standard Operating Procedures, Frameworks and Guidelines: 1. Security Patch Management Standard Operating Procedure 2. Security Configuration Standards	1. Developed an SOP for Patch Management. 2. In the process of developing a guideline for configuration standards"
		CF 10.4	Non- adherence to ICT Policies and Procedure	CC10.1.4	Disciplinary Procedure Induction Program		RAP 10.4	Raise Awareness on ICT Policies through quarterly news flash	Flash for Q1 on Service Delivery Delivery requirements from users have been circulated
		CF 10.5	Inadequate maintenance of Assets that are critical to ICT Environment (e.g fire equipment in the server room, air conditioning system, UPS, Power Generators, location of server room, etc)	CC10.1.5	Manually Monitoring of Equipment & Environmental Conditions		RAP 10.5	Implementation of Environmental Monitoring System on temperature and power	Local temperature loggers have been procured for recording temperature automatically
<b>ERW1 1</b>	<b>Potential injuries to personnel, visitors and contractors</b>	C F 1.1.1	Non- Compliance/ disregarding (Knowingly or unknowingly) Occupational Health	CC1 1.1.1	Occupational Health & Safety Policy	High	RA P1 0.1.1 a)Review of the Occupational Health & Safety Policy b) Review of the OHS legal appointments	Progress to be reported in quarter 2	

REF	Risk Title	Contributing Factors	Current Mitigation Controls		R/R	Risk Action Plan 2022/2023		Detailed Progress
		& Safety policies and Standard operating procedures. (e.g. Inappropriate use of PPE; )	CC1 1.1.2	Occupational Health & Safety Procedures (SOPs) -MS- SOP-SA002 Health and Safety Representative Procedure -MS- SOP-SA003 Accident Reporting and Investigation Procedure -MS- SOP-SA004 Permit to Work Procedures -MS- SOP-SA005 Confined Space Procedure -MS- SOP-SA006 Excavation Procedure -MS- SOP-SA007 Wearing of Safety Harness -MS- SOP-SA008 Fall Protection Plan -MS- SOP-SA009 Control of contractors working at ERWAT -MS- SOP-SA0010 HSE Plan		RA P1 0.1. 2	No further action plan identified	There will be no reporting for the year under review.
			CC1 1.1.3	Occupational Health & Safety Committees		RA P1 0.1. 3	No further action plan identified	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors		Current Mitigation Controls		R/R	Risk Action Plan 2022/2023		Detailed Progress
				CC1 1.1.4	6-year training plan		RA P1 0.1. 4	Implementation of 2022-2023 OHS Training, in line with the ERWAT wide training plan	Progress to be reported in quarter 2
				CC1 1.1.5	Safety Awareness Program (Central Safety Meetings, District safety meeting & Tool box talks)		RA P1 0.1. 4	Conduct Medical surveillance	Counselling conducted internally by the ERWAT In-house nurse. No vaccinations were reported for the period under review.
				CC1 1.1.6	Safety Induction		RA P1 0.1. 4	No further action plan identified	There will be no reporting for the year under review.
		C F 1 1. 2	Deteriorating workplace condition due to inadequate maintenance	CC1 1.1.7	2022/2023 Maintenance Plan		RA P1 0.1. 4	No further action plan identified	There will be no reporting for the year under review.
				CC1 1.1.7	Medical Surveillance policy		RA P1 0.1. 4	Review of the Medical Surveillance Policy to incorporate Compulsory medical examination as part of recruitment process and period medicals for high risk employees	The policy is under review. Inputs into policy has been obtained from service provider.
		C F 1	Unauthorised entry to ERWAT properties with the aim of Vandalising,	CC1 1.1.9	Security Services Policy		RA P1 0.1. 4	No further action plan identified	There will be no reporting for the year under review.

REF	Risk Title	Contributing Factors		Current Mitigation Controls		R/R	Risk Action Plan 2022/2023		Detailed Progress
		1.3	theft,(armed robberies)	CC1 1.1.1 0	Security Services Standard Operating Procedure -Security Operations Room Procedure -Security Systems Procedure -Trespass procedure -Guarding Procedure -Incident Reporting Procedure		RA P1 0.1. 4	Implementation of Security Awareness Program	Progress to be reported in quarter 3.
				CC1 1.1.1 1	Security Induction Program		RA P1 0.1. 7	No further action plan identified	There will be no reporting for the year under review.

Emerging Risks (Narrative)

## **1. Legislative (only if applicable to your department)**

Compliance with legislation that applies to the entity is critical to the existence and operations of ERWAT. 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. Companies Act 71 of 2008
2. Municipal Systems Act 32 of 2000
3. National Water Act 36 of 1998
4. National Environmental Management Act
5. Municipal Finance Management 56 of 2003
6. Labour Relations Act 66 of 1995
7. Occupational Health and Safety Act 85 of 1993
8. Disaster Management Act 57 of 2005

## 2. Key Audit Matters and Progress

ERWAT obtained a qualified audit opinion from the AGSA for the 2020/2021 financial year.

Eleven (11) findings were included in the Management Report, of which six (6) were audit report items. Of these eleven (11) findings, seven (7) have been resolved to date (30 June 2022).

No.	Finding Heading	Status	Action plan
1	Fruitless and wasteful expenditure not prevented	Resolved	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>Continuous awareness on cyber-attacks being communicated via company news flashed.</li> <li>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</li> </ul>
2	Irregular expenditure not prevented	Unresolved	<ul style="list-style-type: none"> <li><b>03/10/2022</b> The Unauthorised Irregular Fruitless and Wasteful Expenditure Reduction Plan has been approved and Implemented, further to that SOP 20 was approved on the 15th of July 2022 and circulated to all Internal Stakeholders.</li> </ul>
3	Assets not adequately tagged	Unresolved	<ul style="list-style-type: none"> <li><b>03/10/2022</b> The Fixed Assets team has begun the process of affixing the assets. The process is on going due to the large amount of asset tags that need to be affixed to the assets.</li> </ul>
4	Consistency of reporting of % target on Maintenance KPI	Resolved	<ul style="list-style-type: none"> <li>Continuous review of the approved business plan against reported targets.</li> </ul>
5	ICT control deficiencies	Resolved	<ul style="list-style-type: none"> <li>Obtained appropriate approval for policies (Approved by the board).</li> </ul>
6	Appropriation statement differences – Resolved	Resolved	<ul style="list-style-type: none"> <li>Implementation of Adequate segregation of duties to ensure proper reviews are performed on the AFS before being submitted to the AGSA for audit purposes.</li> <li>Filling of vacancies in order to allow for appropriate reviews. This process has commenced.</li> </ul>
7	Deviations not in line with regulation 36	Unresolved	<ul style="list-style-type: none"> <li><b>03/10/2022</b> The Solar Contract module is active, atleast 90% of the active contracts are captured (It is an on-going activity). The SCM Contract Management Policy has been developed and presented to the Acting CFO and should be presented in the next EXCO.</li> </ul>
8	CAPEX expenditure differences on reporting	Resolved	<ul style="list-style-type: none"> <li>Continuous review of the approved business plan against reported targets.</li> </ul>
9	Maintenance expenditure differences on reporting	Resolved	<ul style="list-style-type: none"> <li>Continuous review of the approved business plan against reported targets.</li> </ul>
10	Irregular expenditure Disclosure	Resolved	<ul style="list-style-type: none"> <li>N/A</li> </ul>
11	Consequence management	Unresolved	<ul style="list-style-type: none"> <li><b>03/10/2022</b> 2018/2019 investigations into irregular expenditure report was completed on 14/02/2022 by COE internal Audit. Charge sheets to be issued to implicated employees during the month of October 2022. Disciplinary hearing to be held last week of November 2022.</li> </ul>