2020/21 QUARTERLY REPORTING TEMPLATE AGAINST THE APPROVED BUSINESS PLANS

1. Executive Summary by the Department

ERWAT achieved two (2) out of five (5) reportable key performance indicators. Two (2) targets being Audit Opinion from AGSA and Number of Repeat Audit Findings will be reportable in Q2/Q3. The compliance in terms of the wastewater treatment works license conditions and/or exemptions standards was at 88% against a target of 90%. The major contributor to non-achievement of the target is due to aging infrastructure which is also operating above both hydraulic and organic design capacity. ERWAT has developed a 5- year CAPEX plan detailing all required CAPEX upgrades and refurbishments and subsequently submitted a report to the Department of Water and Sanitation detailing the risks associated with the lack of capacity at the ERWAT plants in detail, and the associated costs to mitigate the risks. This report is to be taken to Council, having followed all due processes.

ERWAT had been able to strengthen its position with various stakeholders by entering into various strategic partnerships with private and public sector, where memorandum of understanding and agreements have been agreed upon therefore, ERWAT was able to exceed its target by 19% on external revenue as a result of Intervention projects which were undertaken by the entity as an Implementing agent which yielded positive results.

In the 2020/2021 financial period ERWAT remains focused on achieving operational excellence in water care and resource recovery within the available approved budget.

Table A: Summary of Service Delivery Performance

Service Delivery Monitoring				
	Total number of targets set for the quarter	**Achieved**	**Not achieved**	**Variance**
City Wide SDBIP	2*	1	1	1
Departmental SDBIP	3*	1	2	2

**City Wide - only 2 of 3 Targets reportable for this Quarter*
**Department Wide – only 3 of 4Targets reportable for this Quarter*

Brief Highlight the key risks encountered during this reporting period and the mitigating actions.

The key risks encountered during the first Quarter of 2020/2021 reporting period are;
1. Budgets cuts that will affect service delivery and

Late payments made by the City which result in late payments to critical suppliers. This makes it difficult for the Entity to adhere to the 30-day payment terms as required by Section 65(2)(e) and section 99(2)(b) of the Municipal Finance Management Act

Brief Financial Headlines (current and projection for next Quarter – actual versus budget):

ERWAT has been struggling to recover payments due from the CoE for the first quarter of the 2020/2021 financial period. The most notable of these are as follows:

1) Six (6) month delay in receipt of pump station income from the COE to the value of R19,3 million.
2) Three (3) month delay in receipt of pump station income to the value of R19,7 million.
3) Two (2) occurrences of late payments, roughly one week, by the CoE for service charges to the value of R93,5 million each.

ERWAT has underspend in the first quarter by approximately 30%, which was primarily due to:

1) Timing difference in billing receipt for Electricity (Bulk Purchases)
2) Under-expenditure on repairs and maintenance
3) Curtailment on expenditure on pump station operation and maintenance
4) Delays encountered in the filling of vacancies for the first quarter.

The above is discussed in more detail under section 3, table 5.

2. Service Delivery Monitoring

2.1 CITY- WIDE KPI'S

2.1.1 KPI 1 – City-wide

% compliance with wastewater treatment works license conditions and/or exemptions standards

Method of Measure:
Water Quality analysis of all 19 Waste Water Treatment Works calculated as a percentage of parameters complying against the set standards as per Water Use Licences/exemptions. The percentage is then averaged to get the overall % compliance.

Evidence
- Water Quality analysis reports per Wastewater Treatment Work and per month;
- Quarterly reports, showing the Water Use License standards and compliance calculations;

Q1 Target
90%

Q1 Actual
88%

Comment:
Not achieved.

Reasons for non-compliance:
1. Hydraulic and organic Capacity
2. Industrial Effluent
3. Critical Equipment failures
4. Power outages
5. Ageing civil infrastructure

Non-compliance of final effluent:
Hartebeesfontein, Olifantsfontein, Ancor, Jan Smuts, Dekema, Vlakplaats, and Tsakane, did not meet their Water quality targets due to the following reasons:

1. **Hydraulic Capacity and Organic Capacity:**

Olifantsfontein, Ancor, Jan Smuts, and Vlakplaats operated at a hydraulic capacity exceeding the design capacity of the plants, therefore affecting the water quality compliance negatively.

Olifantsfontein operated at a hydraulic capacity of 99 Ml/d exceeding the new regraded design capacity of 65 ML/d, without Module 3 collapsed PST and the Biofilters, affecting the water quality compliance negatively. Although phase 1a and 1b project are in implementation phase with phase 1c at the pre bid specification phase, they are not going to address the current operational capacity challenges of 152% as the new capacity regrading of 64.6 (65) Ml/d without Module 3 PST and Biofilters which is the current status and 71.7 (72 Ml/d with module 3 PST is recommended. Although Heidelberg, Herbert Bickley and Waterval achieved their water quality targets, they are operating above their hydraulic design capacity with an ever increasing risk of incidents of non-compliance escalating up to full non-compliance of the plants. (Refer to Section 3.4 for details per plant)

Rynfield, Olifantsfontein, Ancor, and Vlakplaats operated above their organic design capacity during Quarter 1 which had a negative impact on the final effluent compliance.

Although Benoni and Waterval operated above their design organic capacity, the plants are still meeting their water quality targets, however an increasing risk, due to the escalation of incidents of non-compliances will occur in the near future. (Refer to Section 3.4 for details per plant)

Action taken:
ERWAT does not have Capex funds to extend/upgrade the plants, and therefore have serious challenges in supporting the CoE in meeting the Growth Development Strategy (GDS2055) and the development of the Aerotropolis.

ERWAT has developed a 5- year CAPEX plan detailing all required CAPEX upgrades and refurbishments. ERWAT's request is that the CoE fairly and proportionally reallocate the Bulk infrastructure grants, which will at least enable ERWAT to refurbish and optimise infrastructure. ERWAT has subsequently submitted a report to the Department of Water and Sanitation detailing the risks associated with the lack of capacity at the ERWAT plants in detail, and the associated costs to mitigate the risks. This report is to be taken to Council, having followed all due processes

2. Industrial effluent:
Hartebeestfontein, Olifantsfontein, Ancor, Benoni, Rynfield, Jan Smuts received industrial effluent during Quarter 1 impacting negatively on the plant operations and final effluent compliance. This was after the country went to level 2 and 1 of the lockdown allowing more economic activity and subsequently more industrial discharge. (Refer to Section 3.4 for details per plant)

WCW	Organic load increase from Q4 to QUARTER 1	Number of high industrial impacts in QUARTER 1	Number of high industrial impacts in Q4
Ancor	31%	77 of 92	27 of 91
Jan Smuts	74%	9 of 92	3 of 91
Herbert Bickley	87%	11 of 91	2 of 91
Heidelberg	95%	18 of 91	30 of 91
Jan Smuts	74%	9 of 92	3 of 91
Benoni	110%	6 of 92	0 of 91
Hartebeestfontein	94%	74 of 92	15 of 91
Olifantsfontein	111%	56 of 92	70 of 91

Although Benoni, Herbert Bickley, Heidelberg received industrial effluent during Quarter 1, the plants are still meeting their water quality targets, however an increasing potential risk of non-compliance is anticipated in the near future (Refer to Section 3.4 for details per plant)

Actions taken:
Any incident where industrial effluent received at the WCW exceeds the capacity of the plant, or impacts negatively on the optimum operation of the plant, it is communicated to the CoE Water and Sanitation Department: Water Quality Section, whom will investigate the incident and manage the non-compliant industrial CoE client according to the Water and Sanitation By-laws and the applicable limits for industrial effluent discharges. Minimising risks at source is the most cost-efficient mitigation control in this regard.

ERWAT and the COE has embarked on a project to develop an improved industrial management model. As the CoE needs to appoint a professional service provider (PSP) for this project, the project has not moved forward due to a lack of funding. ERWAT and the CoE will work very closely with the PSP once the project kicks off.

3. Failure of critical equipment:

Rynfield, Olifantsfontein, Hartebeestfontein, Ancor, Jan Smuts Dekema, Vlakplaats and Tsakane had multiple equipment failures affecting the compliance of the plants.

WCW	Critical equipment failures QUARTER 1	Critical equipment failures Q4
Ancor	23	20
Hartebeestfontein	11	10
Jan Smuts	3	1
Welgedacht	59	61
Dekema	20	6
Waterval	54	55
Vlakplaats	36	10
Herbert Bickley	28	26
Tsakane	35	4

Failure of critical equipment remains a challenge even for the 12 WCWs that attained the water quality targets, as described under Section 3.4 of this report.

Action taken:

The new ERWAT asset maintenance policy has been approved. The maintenance plans, in line with the approved maintenance policy, are now being implemented. It is, however, to be noted that the maintenance plans are only partially implemented due to the lack of funding as the infrastructure is operating above both hydraulic and organic design capacity, ERWAT will look at submitting request for 2020/2021 Adjustment Budget as well as 2021/2022 draft MTREF for the CoE to look at proportionally apportioning both OPEX and CAPEX within available City budget

4. Power outages

Tsakane, Olifantsfontein Ancor, Rynfield, Welgedacht, were affected by extended power outages impacting on the non-compliance of the plant.

WCW	Source of Supply	Unplanned Power Outages	Duration (Hours)	Planned Outages (Load shedding)	Duration (Hours)	Total Outage (Hours)	Cause
Ancor	CoE	2	15	0	0	0	Cable theft.
Tsakane	Eskom	9	45	13	58	103	Power outage, load shedding and load reduction
Ancor	CoE	2	15	0	0	15	Cable theft.
Dekema	CoE	0	0	26	88	88	Load Shedding
Ancor	CoE	2	15	0	0	0	Cable theft.
Olifantsfontein	CoE	0	0	3	15	15	Transformer Maintenance

The following plants; Esther Park, Heidelberg, Daveyton, JP Marais, Jan Smuts, Welgedacht, Tsakane and Rondebult were affected by load shedding, stand-by diesel generators were in place to partially mitigate this risk, therefor the plants final effluent compliance was not adversely affected. (Details of all outages: refer to Section 3.4)

Actions taken:

The procurement of a stand-by generator for Ancor's disinfection section, as well as generator for Rynfield is currently on hold and will only continue once CAPEX 2 funding becomes available. Repairs to the Dekema generator

have been delayed due to the non-availability of spares during the COVID Lockdown period. Expected repairs will take place during Quarter 2.

Tsakane plant Management to engage Eskom to cease implementing load reduction at the plant since it renders essential service.

5. Ageing infrastructure

Olifantsfontein, Hartebeestfontein, Esther Park, Ancor, Jan Smuts, Ratanda, Herbert Bickley, Heidelberg, Tsakane, Dekema, Rondebult, and Vlakplaats have challenges with failed civil structures where rehabilitation/repairs are urgently required. Where failed structures had to be closed out, the available capacity at the plants such as Olifantsfontein, Ancor, and Jan Smuts is further reduced, impacting compliance of the plants. Details of the failed structures are described under section 3.4.

Actions taken:

An in-depth structural audit of the civil structures of plants needs to be conducted before any rehabilitation/repairs can commence. There is currently limited CAPEX or OPEX funds available to upgrade/rehabilitate the essential infrastructure of the various works, and therefore most work is halted due to the unavailability/inefficiency of the said structures, the overloaded conditions of the process units are further exacerbated.

Ancor: CAPEX funds have been made available in 2020/2021 to rehabilitate/rebuild some of the most critical structures, namely the Biofilter distribution towers supplying wastewater to the Biofilter modules.

An intervention project commenced at Olifantsfontein to refurbish infrastructure in order to restore the plant's capacity to its original state of 105 Ml/d. Further requests have been made to the CoE to increase the current year CAPEX and OPEX budgets, however, no additional funds were approved

2.1.2 KPI 2 – Metro-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

R20 000 000

Q1 Actual

R 24 829 143

Comment:

The target for the first Quarter of R20 000 000 in external revenue was exceeded by R4 829 143

Target Exceeded

The target was overachieved due to Intervention projects which were undertaken by the entity as an Implementing agent which yielded positive results.

Corrective Measure

Owing to the target being overachieved for Q1, there are no corrective measures required. It is necessary to maintain the revenue enhancement strategy by embarking on a market penetration action to develop the business. This includes entry into new market segments and maintaining the existing business in both the private and public sector

2.1.3 KPI 3 – Metro-wide

Audit Opinion from AGSA.

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

Audit report from AGSA

Q1 Target

N/A

Q1 Actual

N/A

Comment:

Not reported in Quarter 1

2.2 KPI 2 Departmental

2.2.1 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

1. Project progress reports (weekly, quarterly and Annual reports)
2. Payments certificates
3. Invoices

Q1 Target

20%

Q1 Actual

10.7%

Comment:
The target for the quarter has not been achieved. ERWAT expended 10.7% of capital expenditure against a target of 20%, leading to a negative variance of 9.3%. However, the department is putting measures in place to mitigate the challenges stated above. Amongst others, below are the reasons for the poor performance in expenditure for Quarter 1;

Reasons for non-compliance:
Majority of the industries that supply the contractors were closed during Level 4 and 5 Lockdown. The industries commenced partial operation only under level 3 lockdown. It is anticipated that there will be improvement in the supply of equipment and goods in quarter 2 since the country is in lockdown level 1.

Corrective Measure
Expenditure Acceleration plan is implemented and being monitored. These measures will ensure that the Quarter 2 CAPEX target of 40% cumulative is achieved.

2.2.2 KPI – 2 Departmental SDBIP

% 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

Q1 Target
20%

Q1 Actual
8.1%

Comment:
NOT Achieved. Expenditure year to date (R7 811 458.94) / total approved maintenance budget is (R96 197 637) to yield overall 8.1% of the repair and maintenance budget spent.

The actual reported expenditure on repairs and maintenance includes unprocessed invoices to the value of R5 931 626.52

which will be included in the PoE

Reasons for not achieving 20% target

1. ERWAT has under spent on repairs and maintenance (planned and ad-hoc) for the first quarter YTD.
2. This under spent is mainly contributable to scheduled maintenance not being performed in Quarter 1 due to the COVID-19 lockdown regulation, this was done to avoid overcrowding of personnel at the wastewater treatment plants.
3. Skeleton Maintenance personnel were only utilised for Emergency unforeseen breakdowns.

Action taken to address Challenges
Full maintenace staff compliment has resumed work under Covid lock down level 1, therefore more work schedules will be loaded and executed in QUARTER 2 in order for the department to close the gap that was created in Quarter 1. A weekly spending tracking tool will be developed to expedite departmental performance in Quarter 2.

2.2.3 KPI – 3 Departmental SDBIP

% of procurement spend allocated to SMME's

Method of Measure
The indicator measures the Rand value of support to SMME's through ensuring appropriate application of preferential procurement practices. This support will be calculated at 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 simple count of the Rand value of support to SMME

***Method of measure to be reviewed at mid-term (Adjustment Budget for 2020/2021) ***

Evidence
- Dated and signed Letter of appointment or subcontract with support (contract) amount Award
- Invoices paid to SMME'S
- Listing (Register) of SMME supported with support amount

Q1 Target
33%

Q1 Actual
94.39%

Comments
The target of 33% was exceeded by 61.39%

2.2.4 KPI – 4 Departmental SDBIP

Number of audit findings cleared per quarter.

Method of Measure
Number of audit findings cleared against a set number of targeted audit findings to be cleared.

Evidence
Implementation of the actions plans as per the recommendations on the Management Report issued by the AG (SA).

Q1 Target
N/A

Q1 Actual
N/A

Comments
Not reported in Quarter 1

3.1 City-Wide/Institutional SDBIP 2020/21

Refer to the City-wide SDBIP 2020/21.

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 (Output level only)	Description of Portfolio of Evidence Verified	Baseline (2019/20 estimated)	Annual Target for 2020/21	1st Quarter Planned Output as per SDBIP	1st Quarter Actual Output	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	1st Quarter Planned Budget	1st Quarter Actual Expenditure
National Prescribed Indicators															
N/A															
Provincial Indicators															
N/A															
City of Ekurhuleni Indicators															
IDP Strategic Objective 2: To build a clean, capable and modernized local state															
ERWAT	Improved Quality of water (including wastewater)	38	Total revenue generated from external business	Invoices coupled with general ledger with a balance that agree to the amount reported	R50 600 000	R100 000 000	R 20 000 000	R 24 829 143,41	R4 829 143,41	Target achieved and exceeded (R24 829 143,41)	The target of the QUARTER 1 was over achieved by 19%	The target was overachieved due to Intervention projects which were undertaken by the entity as an Implementing agent which yielded positive results.	No remedial action is required due to the overachievement of the target. The required action is to sustain the acquired revenue.	R5 462 138	R 9 723 871,27

Entity	Outcome	Ref No.	Performance Indicator (Output level only)	Description of Portfolio of Evidence Verified	Baseline (2019/20 estimated)	Annual Target for 2020/21	1st Quarter Planned Output as per SDBIP	1st Quarter Actual Output	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	1st Quarter Planned Budget	1st Quarter Actual Expenditure
	To build a clean, Capable and Modernised Local State	39	Audit Opinion	Dated and signed Audit report from AGSA	Unqualified Audit Opinion	Unqualified Audit Opinion	0	Not reported in Q1	Not reported in Q1	Not reported in Q1	Not reported in Q1	Not reported in Q1	Not reported in Q1	Opex	None
IDP Strategic Objective 4: To protect the natural environment and promote resource sustainability															
ERWAT	Improved Quality of water (including wastewater)	57	Percentage compliance with wastewater treatment works license conditions and/or exemptions standards	Water Quality Data of each Wastewater Treatment Works (from the Lab) Spreadsheet used to calculate over all compliance. Applicable Water use authorization of each Waste Water Treatment Works	89%	90%	90%	88%	2%	Target not achieved		Hydraulic and organic Capacity, Industrial Effluent, Critical Equipment failures, Power outages, Ageing civil infrastructure	1. Plants need to be upgraded urgently to cater for the current backlog in capacity as well as future developments. 2. ERWAT and CoE have embarked on a project to develop an improved industrial management model. The CoE to appoint a professional service provider (project has not moved forward due to lack of funding) ERWAT and CoE will work	R168 431 645	R122 336 089

Entity	Outcome	Ref No.	Performance Indicator (Output level only)	Description of Portfolio of Evidence Verified	Baseline (2019/20 estimated)	Annual Target for 2020/21	1st Quarter Planned Output as per SDBIP	1st Quarter Actual Output	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	1st Quarter Planned Budget	1st Quarter Actual Expenditure
													very closely with the PSP. 3. Revised Asset Management plans to reduce breakdowns. 4. Awaiting funds to execute. Structural audits and rehabilitation of structures.		

3.2 Entity's SDBIP Score card with Key Performance Areas and Indicators 2020/21

Table 2: Entity's SDBIP

Entity	Outcome	Ref No.	Performance Indicator (Output level only)	Description of Portfolio of Evidence Verified	Baseline (2019/20 estimated)	Annual Target for 2020/21	1st Quarter Planned Output as per SDBIP	1st Quarter Actual Output	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	1st Quarter Planned Budget	1st Quarter Actual Expenditure
IDP Strategic Objective 2: To build a clean, capable and modernized local state															
ERWAT	Improved Quality of Water including Wastewater	1.M	Percentage Capital expenditure on planned projects	Finance year to date expenditure report	95%	95%	20%	10.7%	9.3%	Target not met	Expenditure Acceleration plan in place to ensure that 40% in Q2 target is achieved	Refer to section 3 below [reasons for not achieving the target.]	Expenditure Acceleration plan is implemented and being monitored	R 41 200 000	R22 032 512.23
	Improved Quality of Water including Wastewater	2.M	Percentage of repairs and maintenance budget spent	Finance year to date expenditure report	84%	95%	20%	8.1%	11.9%		In Progress	More work schedules will be loaded and executed in QUARTER 2 in order for the department to close a gap that was created in QUARTER 1. Weekly spending tracking tool will be developed to expedite		R 19 239 527	R 7 811 458.94

Entity	Outcome	Ref No.	Performance Indicator (Output level only)	Description of Portfolio of Evidence Verified	Baseline (2019/20 estimated)	Annual Target for 2020/21	1st Quarter Planned Output as per SDBIP	1st Quarter Actual Output	Variation	Actual Output Rating	Progress on Targets	Reason(s) for Variation	Remedial Action	1st Quarter Planned Budget	1st Quarter Actual Expenditure
												departmental performance in QUARTER 2.			
	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	R14 184 369	33.33%	33.33%	94.39%	61.06%		Achieved		None	R16 302 813	R101 240 388
	Improved Quality of Water including Wastewater	4.M	Number repeat audit findings	AGSA signed management letter	4	0	-	Not reported in Q1	Not reported in QUARTER 1	Not reported in Q1	Not reported in Q1	Not reported in Q1	Not reported in Q1	-	-

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

A. *Flows*

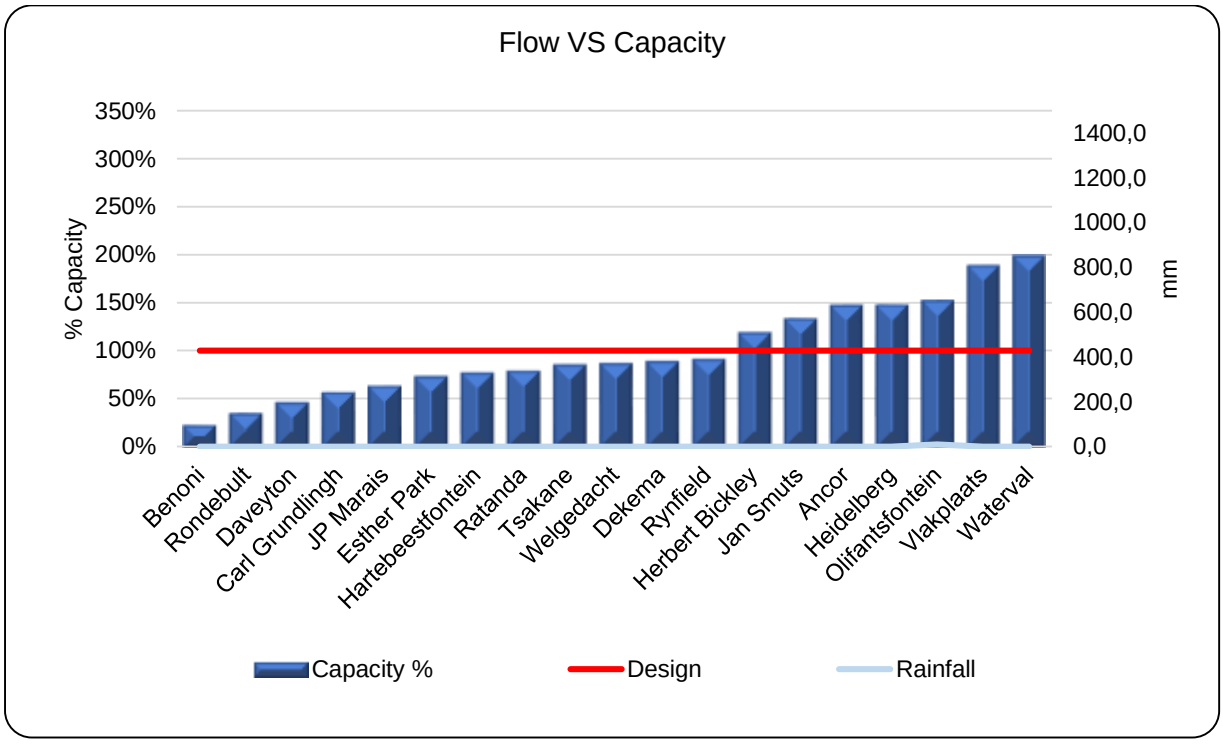


Figure 1

A total of 74 350 Ml was treated in QUARTER 1, at an average of 812 Ml/day, utilising 123% of the capacity.

3.4. Service Delivery Highlights and Challenges

A. *Flows*

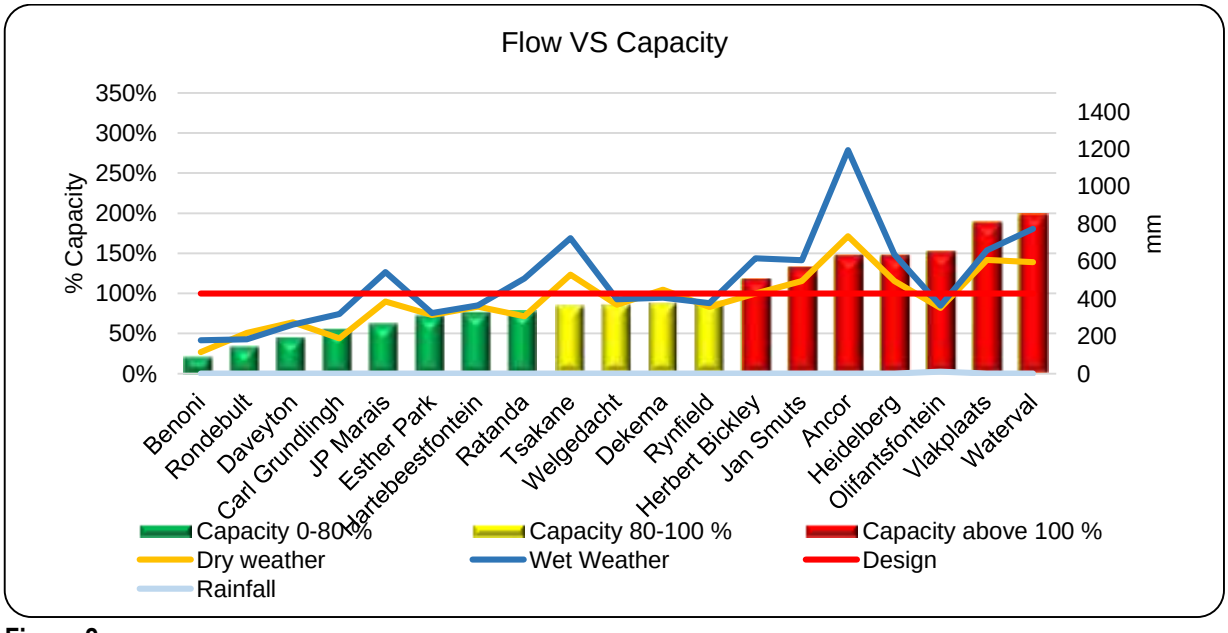


Figure 2

As can be noted in the above graph, during Q1 seven (7) out of the nineteen (19) Wastewater Treatment Works were operating above their design capacity, four (4) operating between 80% and 100%, and eight (8) operating below the 80% mark.

Ancor operated at 147%, Heidelberg at 147%, Jan Smuts at 133% and Herbert Bickley at 118% Olifantsfontein at 152% of its capacity, with large regional plants such as Vlakplaats operating at 188% and Waterval operating at 198%. Additional capacity is urgently needed.

Plant	Design Capacity	Flow	Rainfall
Ancor	15.00	22.00	3.0
Benoni	16.00	3.38	0.0
Carl Grundlingh	5.00	2.77	12.0
Daveyton	19.00	8.56	3.3
Dekema	31.00	27.23	0.0
Esther Park	1.00	0.72	8.0
Hartebeestfontein	63.00	47.85	0.0
Heidelberg	5.40	7.93	17.8
Herbert Bickley	15.10	17.77	19.5
Jan Smuts	6.10	8.08	7.0
JP Marais	15.00	9.34	8.0
Olifantsfontein	65.00	98.51	15.0
Ratanda	4.70	3.66	17.0
Rondebult	20.00	6.77	5.5
Rynfield	10.00	9.00	0.0
Tsakane	20.00	16.93	7.5
Vlakplaats	55.00	103.44	1.2
Waterval	170.00	336.89	12.0
Welgedacht	95.00	81.35	4.0

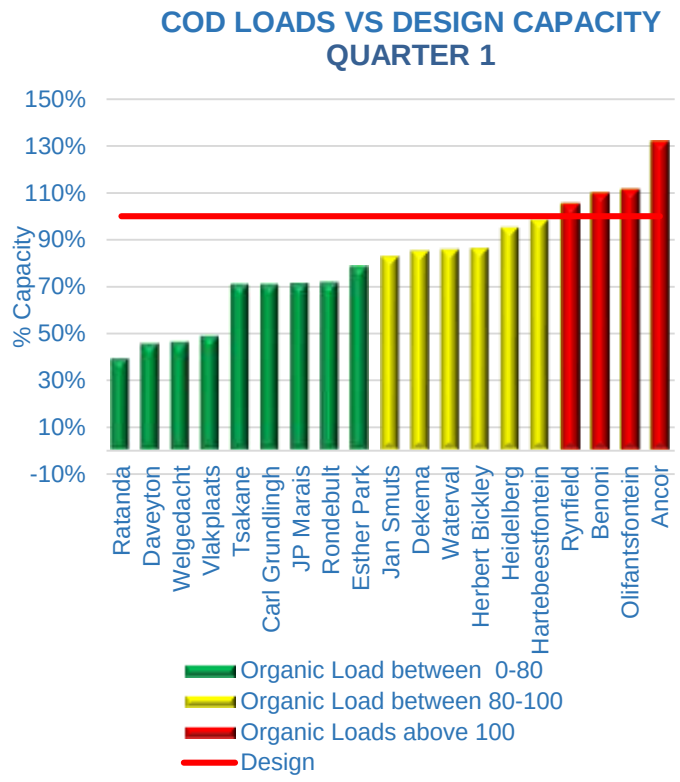


Figure 3

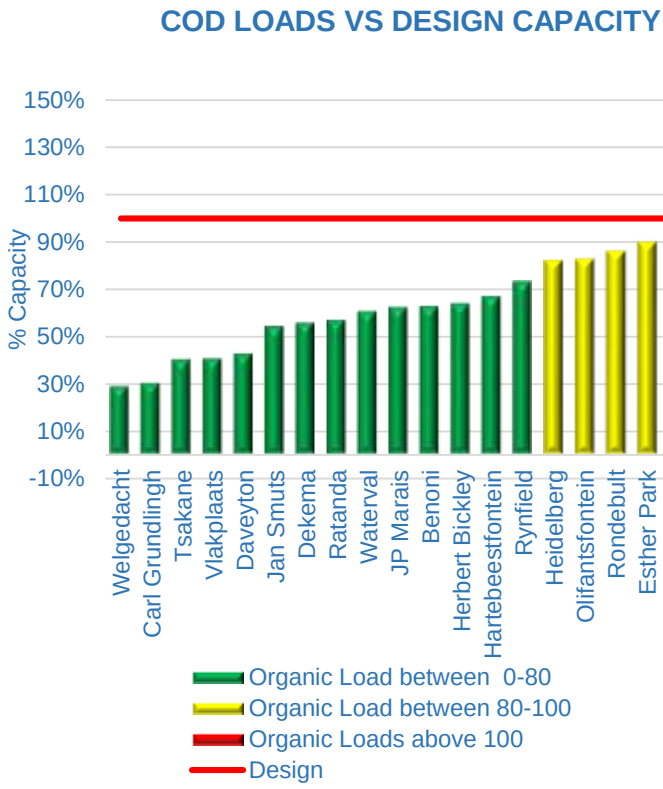


Figure 4

As can be noted in the above graphs, during Q1 as the Country moved from level 3, to level 2 and level 1 of the lockdown, allowing for more economic activity there was an increase in the industrial loads. This resulted in 4 plants operating above their design organic capacity and six plants operating between 80 and 100% of their design organic capacity. In quarter 4 when the country was still in lockdown levels 5,4 and 3 none of the plants were operating above their design capacity and only 5 were operating between 80% and 100% of their capacity.

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
Plant complied with WUL effluent standards for Q4 Physical: 91% Chemical:89% Micro:92%,therefore Q1 overall compliance =91%	Plant operated at 72 % of hydraulic capacity	Plant operated at 79 % of organic capacity	Plant experienced blocked sewer line which affected incoming flow between 23 – 27 Aug 2020	Suspected industrial effluent pollution in Q1	3x critical equipment failures occurred in Q1 that affected ammonia, COD and micro compliance	6x power failures recorded in the quarter	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 complied with WUL effluent standard by 88%	Plant operated at 86.35% of hydraulic capacity	Plant operated at 94% of organic capacity	Abnormal fluctuations in inflows in Q1, 3 days on the 9, 10 and 28 September 20. Flows received were 109 Ml/d, 129Ml/d and 103 Ml/d respectively.	Plant received industrial high strength effluent on 74 of 92 days	11 Critical equipment failures occurred in Q4	No Power failures during Q1	Aging concrete on plant infrastructure.	Digester 6 & 9 sludge recirculation nozzles blocked	There were no veld fires experience in Q1	873144,00 kg of dry sludge was irrigated to the 200 hectares farm	Borehole two has high concentration of Nitrates	Sinkhole next to the fence towards FST 5 & 6 and around the Farm	Licence amendment with relaxation on Electrical conductivity, Ammonia, E.coli and COD was granted in July 2019	Sludge classification is B2c, not suitable for the intended purpose, this requires further engagement with the farmer	No challenges	There was a portable water leak opposite to CoE substation on the 26/09/2020
Plant complied with WUL effluent standards. Average Compliance= **93% ,chemical= 88% , micro 92% and physical = 99**%	Plant operated at 90% of hydraulic capacity	Plant Operated at 94.7% of organic capacity		Non industrial effluent was received due Q1	1 critical equipment failures occurred in Q1 RAS pump 1 motor burned out	No power failures occurred in Q1	Pavement Cracked and Digesters & reactor tank concrete structure is cracked .Bio-feeder structure is cracked	None	No veld fires witnessed ne	Dried sludge is stockpiled on the plant	Unlined sludge paddies , Unlined Maturation ponds and Contact tank, lagoons	Dolomitic investigation not done yet	DWS allowed to Rynfield to continue with WUL amendment standard	Sludge classification samples taken to ERWAT scientific services, awaiting results. Current sludge classification A2c is suitable for the instant lawn	NA	N/A

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
														application according to WRC guidelines. Screenings and grits that are generated at the plant are collected by CoE		
Plant complied with WUL effluent standards Physical: 100% Chemical:96% Micro:97%,therefore Q1 overall compliance =98%	Plant operated at 21 % of hydraulic capacity	Plant operated at 110 % of organic capacity	Flow interruptions since July due to Tom Jones pump station which is the main source being operated manually by the security guards deployed by CoE	Coloured water received, 7 pollution incidents	3 critical equipment failures occurred in Q1 that affected micro compliance	3-power failures that lasted 34.85 hours	Open digesters walls are cracking, Humus tank weirs plates worn out	None	None	Dried sludge is stockpiled on the plant and applied on instant lawn	Unlined sludge paddies and maturation ponds could cause possible pollution	N/A	N/A	Sludge classification samples taken to ERWAT scientific services, awaiting results. Current sludge classification A2c is suitable for the instant lawn application according to WRC guidelines. Screenings and grits that are generated at the plant are collected by CoE	N/A	N/A

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
Plant did not comply with WUL effluent standard Plant complied with 73% compliance	Plant operated at 152% of hydraulic capacity	Plant operated at 111 % over the organic capacity	Abnormal fluctuations in inflows in Q1, were seen in August when flow meters were defective and giving low flow Aug average was 97Ml/d	Plant received industrial high strength effluent on 56of 92 days. Plant received very high Electrical Conductivity above 100 mS/m, 68 of 92 days.	9 critical equipment failures occurred in Q1	3– Power failure that lasted for 15 hours with diesel consumption of 3176 litres. During scheduled power failures for maintenance	Module 3, Anaerobic digesters.	Digester 4 of 6 digesters are blocked due to sand accumulation	One veld fire inside the plant in Q1 (July)	1 365 392 kg in Q1 Sludge is disposed on different farms around Bapsfontein area and is used for agricultural purposes	Unlined emergency dams contaminating borehole no.2&3	2 x Sinkholes behind and in front of the old laboratory which occurred in Dec 2019 still not rehabilitated	Olifantsfontein WUL is stringent on Ammonia of < 2mg/l, SS of 15 mg/l and and EC of < 80 mS/m.	Sludge is classified into two streams: (1). Dewatering unit(B3a), the sludge not suitable for cultivating crops such as fruits trees (2). Drying beds (A1a), No restrictions and requirements apply	Road to upstream sampling point need to be graded and there is high erosion on the banks. To be reported to the CoE..	No Challenges
Plant compliance for Q1 is 69% Non-compliant parameters: Chemical 63% and Micro 64%, Physical 82%	Plant operated at 147% of its hydraulic capacity	Plant operated at 130% of organic capacity. Contributing Factor was the industries that restarted at the beginning of the quarter	Ancor experienced normal flow during the Q1, but are still over the hydraulic capacity. The RSA Covid -19 lockdown also reduces flows but the loads organically is still high, effecting compliance	Plant received high COD industrial effluent on 76 days. In Q1 Increase due to industries that started after lockdown moved to level 3	23 critical equipment failures occurred in Q1, namely: 8 failures on the ferric chloride dosing system in QUARTER 1; 2 failures of the chlorine system, raw sludge pumps to digesters failed and was repaired, humus sludge pumps and degritter broke down(not yet repaired) .	2 outages occurred (15 hrs. total) (Generator backup available for whole plant except disinfection section).	Bio filter flow division boxes partially collapsed, humus tanks/ PST's- and digesters structures are crumbling /cracked.	3 digesters are blocked with sand and are not in operation. This cause the plant to run out of sludge handling capacity, which prevent proper desludging and resulting in non-compliances.	No veld fires occurred during Q1.	Stockpile and sludge paddies area not lined. Stockpiles on plant is a risk due to veldfires and environmental pollution	Unlined sludge paddies pollute underground water	Area around humus tanks and final effluent channel are dolomitic according to Geotech study performed.	N/A	Solid waste (screenings and grit) is removed by CoE.	Road in very bad condition, potholes was repaired.	N/A

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
Plant complied, compliance for Q1 is 99%.	Plant operated at 45% of its hydraulic capacity.	Sufficient capacity. Plant operated at 46% of its organic capacity.	Numerous sewer blockages in the CoE network and potable water supply interruption to Etwatwa lead to inconsistent and irregular flow to the plant.	N/A. Domestic only.	12 Critical equipment failures occurred in Q1, namely: Blower one, Chlorine rotameter 1, Contact tank valve faulty, Blower 2 failure, Aerator 7 failure, Burst water pipe at main office, Compressor failure x2, BNR fine screen x 2, failure of non-return valve on ferric bulk tank and aerator 6 failure.	16 power outages occurred (33 hours total). The Generator for the plant failed. Investigation is being conducted on the cause of failure.	Small crack on the CCT side wall. (Do not have effect on the operation at the moment) Suspected broken pipe underground between reactor and clarifiers.	N/A	Veld fires pose a risk during winter, but no incidents during Q1.	Sludge pumped to 2 lined lagoons, and when they are full, sludge overflow to 3 unlined lagoons for solar drying. Space for drying is not sufficient and there are no boreholes at the sludge lagoons to monitor the ground water. This is noncompliance to WUL conditions.	Unlined sludge lagoons pollute the ground water.	N/A	N/A	Solid waste (screenings and grit) is removed by CoE.	N/A	N/A

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
Plant compliance for Q1 is 99%.	Sufficient capacity. Plant operated at 62% of hydraulic capacity	Sufficient capacity. Plant operated at 71% of organic capacity	None.	Plant received industrial high strength effluent on 2 days (2 high COD).	51 critical equipment failures occurred in Q1, namely; PST pump 2 (1 time), WAS pipe (3 times), WAS level meter (1 time), Screen Compactor (1 time), WAS pump 1&2 (23 times), RAS pump (7 times), Clarifier bridges and pumps (x6), Irrigation pump (x2), Chlorine pump & heater (2 times), Aerators (2 times), MLSS meter (1 time), Flocculator (1 time), Final sampling machine (1 time	2 Power outages (4 hours total). Backup generator available.	None. New PST fine screen installed on 08 September	N/A	No veldfires occurred during Q1	Sludge pumped to Welgedacht, where it is treated. WAS pipe transferring sludge to Welgedacht broke 3 times in QUARTER 1. The sludge pipe was stolen on 16 July and replaced on 27 August, which affected the removal of WAS from the system.	Some boreholes polluted. Boreholes monitored monthly.	No dolomitic soil	N/A	Solid waste (screenings and grit) is removed by CoE.	Road in a good condition	None

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
Plant compliance for Q1 is 93%	Plant has sufficient capacity. (operated at 85% capacity)	Sufficient capacity Plant operated at 46% organic capacity.	None		59 critical equipment failures occurred in Q1.namely;Tripping Blowers x3,Slovo pumpstation x3,Defective Chlorine system x6,Booster pumps x3 ,Tripping aerators x 6,Poly pumps x4, Recycle pump x 2, Screw pumps x 5,Mixers x 1, Clarifiers x 3, Grit classifier x 1,Blockages(Ferric pipes, RAS pumps) x4,Washwater pumps x2,Compcator x 1,Pst bridge x 1 Flowmeters x 1 ,power outages x 5	5 Power outages (12 hours total). Backup generator available excluding Module 1 reactor.	N/A	N/A	No veldfires occurred during Q4.	N/A	Unlined Dechlorination channels and Emergency dam	N/A	Very strict WUL standard for Micro compliance(E.Coli) zero counts /100ml.	Solid waste (screenings and grit) is removed by CoE.	Gravel access road in very bad conditions and very slippery when wet.	No potable water supply to the plant. Borehole water used for hygiene activities. Drinking water is being trucked in from other plants.

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
Plant compliance for Q2 is 84% Non-compliant parameters: Chemical 68.21% , Physical 91% and Micro 92%	Plant operated at 149% of its hydraulic capacity	Plant operated at 74% of its organic capacity.	Several blockage in the CoE sewer network.	Plant received industrial high strength effluent on 23 of 73 days.	3 critical equipment failures occurred in Q2. Filter feed pump number 2, Biofilter number 5 and chlorine dosing water booster pumps.	1 power failure (11 hours) Generator backup available for entire plant.	Humus Tanks scum boards, digester number 2's wall and the bio-filters' feed flow division box/tower.		None	Dried sludge is stockpiled on site.	Unlined sludge stockpile area can cause groundwater pollution.	N/A	N/A	Screenings are incinerated at the plant and the grit is buried at the plant. This practice does not comply with WUL conditions.	N/A	N/A
Plant Complied with WUL effluent standards (98.6%)	Plant operated at 54.0% of its hydraulic capacity	Plant operated at 71% of organic capacity	None	None	2 Critical equipment failures for Q1 (2x Brush Aerators)	No power outage	None	N/A	No veldfires occurred during Q1	Land application of sludge is being used	Unlined sludge to land posing ground water pollution	None	None	Collected by CoE to a dedicated landfill site	Access road to the plant is damaged and requires an upgrade.	None
Plant Complied with WUL effluent standards (96.0%)	Plant operated at 118.1% of hydraulic capacity	Plant operated at 86.7% of organic capacity	High incoming flows in July due to 8 mm rainfall.	Plant received industrial high strength effluent on 11 of 91 days	28 Critical Equipment (booster pumps, sludge to land pump, chlorine dosing systems, RAS Pumps and raw sludge recycle and desludging pump)	Herbert Bickley had 0 power outages	Anaerobic digesters cracked concrete structures	6 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	Borehole no.4 showed high count of E.coli in August	None	None	Collected by CoE to a dedicated landfill site	Access road to the plant damaged and requires an upgrade	None
Plant Complied with WUL effluent standards (94.91%)	Plant operated at 147% of its hydraulic capacity	Plant operated at 95.38% of organic capacity	High incoming flows in all the days in Q1	Plant received high COD industrial effluent on 18 of 92 days and high SS on 14 days of 92	3 Critical equipment failures for Q1 (1x aerator; 1x Clarifier Bridge, 1x generator)	Heidelberg had 13 power outage with a duration of 29 hours. 24hours was due to load shedding and 5 hours due to fault from Municipality in Q1. Diesel used was 6902L	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 to the lands and could potentially	Unlined sludge paddies/lack of groundwater monitoring in the sludge paddies	None	None	Screenings and grit generated at the plant are still being buried and this practice is not environmental friendly. Potential groundwater pollution	The access road to Heidelberg works is severely damaged and a new-tarred road is required urgently	None

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
										contaminate groundwater resources						
Plant Complied with WUL effluent standards (99%)	Plant operated at 78% of its hydraulic capacity	Plant operated at 39% of organic capacity	Experienced 2 incident, of low inflow to the plant from 15-17th July 2020 due to plugged sewer by Lesedi contractor so to complete new manhole construction and on 31 August 2020 due to blocked manhole in Obed Nkosi phase 1	None	3 Critical equipment failures for Q1 (1x A-recycle pump; 1x Aerator and1x generator)	Ratanda had 5 power outages with a total duration of 10 hours in Q1	Drying beds drainage system and chlorine contact tanks are badly leaking structures	N/A	Ratanda experienced veld fire incident on 11 August 2020 in Q1. Managed to control the fire, no damage to equipment and no injuries recorded	Dried sludge is stockpiled on-site, potential groundwater pollution	Unlined sludge ponds and leaking drying beds, potential groundwater pollution	None	None	Screenings and grit generated at the plant are still being buried and this practice is not environmental friendly. Potential groundwater pollution	The access road to Ratanda Works is severely damaged and a new-tarred road is required urgently	No link to the Municipal Potable Water Supply, water transported from Heidelberg Works and borehole water is used for other domestic purposes

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
Plant Complied with WUL effluent standards (82%)	Plant operated at 85% of its hydraulic capacity	Plant operated at 75% of organic capacity	Inconsistent and low/high flow due to build-up of screenings on manual screen at Rockville pump station results to spillage in which sewage joins the upstream untreated and prevents the expected flow from reaching the plant.	Plant received high COD industrial effluent on 5 of 92 days.	35 Critical equipment failures for Q1: 5 failures on the blockages of PST pumps. 4 x Sludge floating aerator no.9. 3x Sludge to land pump no.2,2 x A-recycle pump no.2. 3 x Degritter drain pump no.1 & 2; 4 x Chlorine system; 6 x genset, 4 x RAS pump no.2 , 2 x SMART Unit no.3. , 2 x mechanical fine screen no.1	Tsakane had 9 power outages and 13 planned load-shedding events with a total power outage duration of 45 hours and 58 hours to load shedding events in Q1 Total amount of diesel usage during power outages was L and 702L during load shedding events in Q3.	Digesters and channel for raw sewage feeding HYBACS concrete structures cracked and leaking.	N/A	No veldfires occurred during Q1	Sludge pumped to unlined lagoons/ paddies for solar drying. Drying beds have been decommissioned.	Unlined sludge lagoons and paddies/lack of groundwater monitoring at the sludge lagoons and paddies	None	None	None	None	Leaking water line next to Hostel fence created a wetland.
Plant did not comply with WUL effluent standards. Non-compliant parameters Physical 84% Chemical 64% Micro 94%	Plant operated at 88 % of hydraulic capacity	Sufficient capacity. Plant operated at 70% organic capacity	Plant received high flows on 12 out of 92 days	Plant received high COD industrial effluent on 3 of 92 days	6 Critical equipment failures occurred in Q4, namely breakdown of 1 sludge withdrawal pump,2 wash water pumps,1 degritter pump and 2 cascade pumps (final effluent mixing / aeration) Q1 – 20 Critical equipment failures -4 x flow	26 Outages occur (88 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 lagoons for solar drying and dried sludge spread to land area to be ploughed into land.	Unlawful disposal of grit (grit is buried on-site in a trench).	None	N/A	N/A	N/A	N/A

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
					meters , 1 composite sampler , 4 x sludge pump , 1 x grit pump ,1 x broken arms of degritter , 2 x humus tank centre column , 1 x ferric pump , 1 x Generator , 1 x fine screen winch , 1 x biofilter, 2 x cascade pumps , 1 x MCC electrical panel											
Plant did comply with WUL effluent standard for Chemical – 92.5% Compliant Parameters-Micro -91.18% Physical – 92.81%	Plant operated at 33.8% of hydraulic capacity.	Plant operated at 81 % of organic capacity.	High and low, flows due to the sluice gate installed at Klippoortjie. High flows of up to 17.16 Ml/day.	Plant received industrial high COD effluent on 3 of 92 days and 3 ad hoc incidents of industrial pollution were observed and reported	8 Critical equipment failures for Q4 as to 15 Critical equipment failures for Q1. Namely 3 faulty main office building electrical panel, 3 failures on the ferric chloride dosing system, 2 Humus recycling pumps and 7 x Secondary bio filter feed pumps failures.	10 Outages occur (96 hours in total) due to power interruptions.) Load shedding and the lack of Genset for process continuity is a big concern.	Biofilter walls cracked. Brickwork of open channels are unstable, collapsing and cracked. The feed pipe from the primary biofilters to the secondary biofilters has collapsed.	None	1 veld fire occurred during Q1 and 1 during Q4.	Dried sludge is spread on to land and plough into land.	Unlawful disposal of grit and screenings (grit is buried on-site in a trench).	The entire area of the plant are dolomitic	N/A	Attempts were made to get CoE to assist and collect the grit and screening at Rondebult and dispose of it at a dedicated landfill site without any success.	The access road are deterioratin g fast and will need attention soon.	Under ground rusted pipe works needs to be replac ed
Plant did not comply with WUL effluent standards (62%)	Plant operated at 188% of hydraulic capacity.	Plant operated at 49% of organic capacity	High flows of up to 135 Ml/day occurred from dates due to storm	Plant received industrial high strength	3 Critical equipment failures occurred in Q1 - Namely: 5 failures of the	21 Outages occur (153 hours in total) Load shedding is a big concern.	Office building have some cracks.	None	No veld fires occurred during Q1.	Dried sludge is stockpile d on the plant. Demand	Unlined Emergency dams. Unlawful disposal of grit (grit is	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	N/A

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
	Needs to be upgraded		water ingress. Rainfall measured at the plant was 0 mm.	effluent on 0 of 92 days	ferric chloride dosing system. 8 failures of the DBF dosing system, 3 failures of the WAS pumps/VSD,3 failures of Generators,8 Failures of DAF recycle pump,16 failures of raw sludge transfer pumps.					for instant lawn application is seasonal	buried on-site in a trench).				during rainy season is too muddy and slippery	
Plant Complied with WUL effluent standards Average (91%)	Plant operated above capacity (operated at 198% capacity)	Sufficient capacity Plant operated at 67% organic capacity.	Average flow of up to 336.2 Ml/day received due to developments and bypasses for upstream plants. Rainfall measured at the plant averaged at 6 mm.	Plant received industrial high strength effluent on 26 of 92 days. Plant is receiving and treating 30 m^3 of leachate daily from EnviroServ	52 Critical equipment failures occurred in Q1 Mainly from 6 x DAF Recirculation pumps, DAF transfer pump failure, 1x Compressor failures, 12 x aerators and blower trippages, 2 x RAS and screw pump failure, 2 x scum pump failures, 1 x draw off pump failures, 2 x Axial pump failures, 2 x Chlorine hoist, wash water failure, wash water pump	None	None	None	Two veld fires occurred during Q1	Dried sludge is stockpiled on the plant. Demand for agricultural application is seasonal.	Unlined Emergency dams. Unlawful disposal of grit (grit is buried on-site in a trench).	None	N/A	N/A	N/A	

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
					failure, 4 x transfer pump failures, 3 x WAS pump failures, 7 x screen failure, 9 x Cornel pump, belt press and spent wash failures, 1x THS auto sampler failure											

3.5. Project/Infrastructure Report

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, herein below are Mega Catalytic Project:

- Ancor WCW
- Vlakplaats WCW
- Welgedacht WCW
- Herbert Bickely WCW
- Waterval WCW

3.5.1 Ancor Wastewater Care Works (WCW)

The Ancor Works is situated in Springs and falls within the DD5 drainage district. The original design capacity of the plant was 32 Mℓ/d. Conventional biological filtration is employed as the main treatment process. The plant capacity has been downgraded to 15 Mℓ/d.

Plans are currently underway to upgrade the plant to 52 Mℓ/d subject to availability of the funds in order to enhance the treatment capacity. If implemented, these upgrades will ensure that future developments flows are accommodated.

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

3.5.2 Vlakplaats Wastewater Care Works (WCW)

Vlakplaats is situated in Vosloorus and falls within the Drainage District (DD6). The original design capacity of the plant was 83 Mℓ/d. The plant capacity has been downgraded to 55 Mℓ/d. Vlakplaats flow distribution project is currently under construction phase to augment and add a peak flow balancing capacity into the plant by converting the old existing ponds into a balancing tank. Plans are currently underway to upgrade the plant to 189 Mℓ/d in order to enhance the treatment capacity. The upgrade will be done subject to the availability of funds. These upgrades will ensure that future developments flows are accommodated.

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

3	Flow distribution	R 40 000 000	Vlakplaats flow distribution project is currently under construction phase to augment and add a peak flow balancing capacity into the plant.	The project will be commissioned in the 2020/2021 financial year.

3.5.3 Welgedacht Wastewater Care Works (WCW)

The Welgedacht works is situated in Springs and falls within the DD5 drainage district. The original design capacity of the plant was 85 Mℓ/d. The plant capacity has been up-graded to 95 Mℓ/d. Plans are currently underway to upgrade the plant to 327 Mℓ/d in order to enhance the treatment capacity. These upgrades will ensure that future developments flows are accommodated.

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

3.5.4 Herbert Bickley Wastewater Care Works (WCW)

The Herbert Bickley works is situated south of Nigel town and falls within the Drainage District 5 (DD5). The original design capacity of the plant was18.75 Mℓ/d. The plant capacity has been downgraded to 15.1 Mℓ/d Depending on the availability of funds, the plant will be upgraded to 53 Ml/d in order to enhance the treatment capacity.

	PLANNED PROJECTS	BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
1	10 Mℓ/d Plant Upgrade	R 133 546 906.60	The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 53 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth.	The commissioning of the project is subject to the availability of funds.

3.5.5 Waterval Wastewater Care Works (WCW)

The Waterval wastewater care works is the largest works operated by ERWAT and is situated in the DD6 area at the Kliprivier. The original design capacity of the Waterval wastewater care works was155 Mℓ/d. The plant capacity has been up-graded to 170 Mℓ/d. The primary treatment-debottlenecking project is currently at the preliminary design phase to increase the capacity of module 2 and 3, from 40 Mℓ/d to 60 Mℓ/d per module. The project can only be completed subject to the availability of funds. According to the plans, it is envisaged that, some retrofits are required to increase capacity of module 4 from 50 Mℓ/d to 84 Mℓ/d and add an additional 100 Mℓ/d module 5. Below is the summary of these planned projects that have been identified to address planned Mega Catalytic Projects.

3.5.6 The Olifantsfontein Wastewater Care Works (WCW)

Olifantsfontein WCW is situated in Olifantsfontein and falls within the DD3 drainage district. The original design capacity of the plant was 105 Mℓ/d. The plant capacity has been downgraded to 65 Mℓ/d. The works employed both Biological Nutrient Removal Activated process and Biological Filtration process.

Plans are currently underway to resuscitate module 3. The project started way before the capacity regrading studies and it will not mitigate the current capacity challenges. The plant will be upgraded to 221 Mℓ/d as per 50-year master plan. Below is the summary of the approved CAPEX 1 projects for 2020/2021 financial year and as per 50-year master plan.

PLANNED PROJECTS		BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
1	Olifantsfontein WCW: Biofilter Upgrade Project construction Phase 1 a and b	R 20 000000.00	Module 3 resuscitation project is underway with phase 1 a & b at implementation phase	Expected commissioning is end of Q3.
2	Olifantsfontein WCW: Module 3 & Plant Upgrade Project Phase 1 C	R 55 662 000.00	Module 3 resuscitation project, phase 1 c is at pre spec.	Expected commissioning is end of Q2 2021/2022 financial year.
3	Upgrade Olifantsfontein WCW to 221 ML/day	R 1.4 Billion	The capacity treatment plant upgrade is planned in relation to the 50-year master plan.	The commissioning of the project is subject to funds availability

PLANNED PROJECTS		BUDGET REQUIRED	STATUS /COMMENTS	COMMISSIONING DATE
1	New 100 Mℓ/d Module 5 - Extension	R 1 333 549 066.00	The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 584 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth.	The commissioning of the project is subject to the availability of funds.
2	Module 2 and 3 Capacity Upgrade by debottlenecking the primary treatment.	R 20 000 000.00	The primary treatment-debottlenecking project is currently at the design phase to increase the capacity of module 2 and 3, from 40 Mℓ/d to 60 Mℓ/d per module. The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 584 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth.	The commissioning of the project is subject to the availability of funds.
3	Technology Capacity Upgrade 50 Mℓ/d (Module 4)	R 247 975 609.80	The capacity treatment plant upgrade is planned in relation to the 50-year master plan, which computes to 584 Mℓ/d by year 2068. The 50-year flow projection is based on the CoE IDP population growth	The commissioning of the project is subject to the availability of funds.

3. Financial Report

Table 5: Operational Expenditure

EXPENDITURE BY SOURCE	BUDGET ANNUAL	BUDGET FOR 3 MONTH SEPTEMBER 2020	ACTUAL YEAR TO DATE SEPTEMBER 2020	VARIANCE YTD ACTUAL VS YTD BUDGET	VARIANCE % YTD BUDGET VS YTD ACTUAL	VARIANCE YTD ACTUAL VS BUDGET	ANNUALISED PROJECTION
Employee Related Costs - Salaries & Wages	398,147,283	99,536,821	87,744,101	(11,792,719)	-12%	11,792,719	87,744,101
Remuneration of Directors	4,040,764	1,010,191	480,868	(529,323)	-52%	529,323	480,868
Bad Debts (Provision for Bad Debts)	1,625,838	406,460	28,099	(378,361)	-93%	378,361	28,099
Depreciation	105,500,000	26,375,000	22,407,209	(3,967,791)	-15%	3,967,791	22,407,209
Pumpstations	68,563,449	17,140,862	4,406,256	(12,734,606)	-74%	12,734,606	-
Repairs and Maintenance	96,197,537	24,049,409	1,879,832	(22,169,577)	-92%	22,169,577	1,879,832
Interest Expense	48,464,563	12,116,141	7,293,803	(4,822,338)	-40%	4,822,338	7,293,803
Intervention Expenses	-	-	1,856,358	1,856,358	0%	(1,856,358)	-
Bulk purchases	289,945,255	67,486,314	45,411,186	(22,075,128)	-33%	22,075,128	45,411,186
General Expenses - Other	111,635,305	27,908,826	20,414,018	(7,494,808)	-27%	7,494,808	20,414,018
TOTAL OPERATING EXPENDITURE	1,104,120,094	276,030,023	191,921,731	(84,108,292)	-30%	73,230,044	185,659,117

Total Operating Expenditure for the year to date is 30% lower than the budget for the period.

Employee related cost – Salaries and Wages

1. The expenditure for the year to date is 12% below the budget.
2. ERWAT's revised employment structure has been approved and the process of filling vacancies has begun. The vacancies have however not yet been filled as there is a process that has to be undertaken before appointments can be made including advertising, screening, interviews etc. It is expected that the appointments will commence in the 2nd quarter.
3. The under spend on employee related costs is due to existing vacancies not being filled yet.

Depreciation

1. ERWAT has a 15% negative variance relating to depreciation at the end of the first quarter. As the 2019/2020 financial statements are still under review, the 2020/2021 period on the fixed asset register has not yet been opened. The depreciation amount is therefore based on the 2019/2020 year of assessment figures. Once the 2019/2020 financial year is closed, the depreciation will be run on the system in order to get the exact amount based on the 2020/2021 figures.

Pump Stations

1. ERWAT has under spent on pump stations by 74% as ERWAT has not been paid in the previous six months for work performed on pump stations.

Repairs and Maintenance

1. ERWAT has under spent on repairs and maintenance in total R1 879 832 (planned and ad-hoc) for the first quarter YTD.
2. This under spent is mainly contributable to scheduled maintenance not being performed in Quarter 1 due to the COVID-19 lockdown regulation, this was done to evade overcrowding of personnel at the wastewater treatment plants.
3. Skeleton Maintenance personnel were only utilised for Emergency unforeseen breakdowns.

Interest expense

1. ERWAT spent less than expected interest expenditure due to the lower than anticipated interest rate.

Bulk purchases

1. Bulk purchases was 33% lower than budgeted during the first quarter YTD.
2. Usage of Poly for sludge dewatering did not materialized as planned at Olifantsfontein, Welgedacht and Waterval due to equipment failures and unforeseen operational upsets.
3. Procured minimum Calcium Hypochlorite tablets in bulk for disinfection for only 2 plants, 3rd plant changed over to solution. Minimum stock required. Next bulk order will be placed during Quarter 2.

4. R 1 278 017 has been committed to be paid for disinfection chemicals (Chlorine gas and Calcium Hypo solution) in October 2020 (Quarter 2)
5. The reason for the under-spending on electricity is due to the invoicing pattern. Electricity usage for July is billed in August, August usage is billed in September and therefore the billing for one of the three (3) months of the quarter is not available at the end of the quarter.

General Expenses:

1. General expenses have been under spent by 27% which is primarily due to the following:
   1.1. Feasibility studies that will only be conducted later during the financial period
   1.2. Termination of the previous printing contract and utilisation of the transversal contract for printers have resulted in some savings.
   1.3. Tighter cost control over travel, fuel and telecommunication expenses.
   1.4. Lower than anticipated legal costs for advice and litigation
   1.5. Due to the revision of the timing of the regularity audit, the AGSA has not yet commenced billing ERWAT for its services.

Table 6: Capital Expenditure

CODE	Capital Budget (2019/20)	Total Spend (IPAP)	Percentage spent of actual budget YTD
			%
73536449420TCXBHZZER	85 140 000.00	-	0%
73536460020TCXBAZZER	6 000 000.00	6 830 601.77	114%
73546449420TCXBHZZER	12 085 000.00	70 368.00	1%
73616449420TCXBHZZER	16 815 000.00	-	0%
73626449420TCXBHZZER	385 000.00	-	0%
73646449420TCXBHZZER	8 980 000.00	-	0%
73676449420TCXBHZZER	110 000.00	-	0%
73686449420TCXBHZZER	1 550 000.00	-	0%
73696449420TCXBHZZER	1 900 000.00	-	0%
73706449420TCXBHZZER	520 000.00	-	0%
73716449421TCXBHZZER	16 370 000.00	49 900.00	0%
73716456020TCXBCZZER	2 760 000.00	-	0%
73726449420TCXBHZZER	8 895 000.00	-	0%
73816449420TCXBHZZER	3 060 000.00	102 800.00	3%
73826449420TCXBHZZER	2 000 000.00	49 900.00	2%
73836449420TCXBHZZER	26 010 000.00	8 575 634.25	33%
73846449420TCXBHZZER	13 420 000.00	6 364 721.16	47%
TOTAL CAPITAL EXPENDITURE CAPTURED ON SOLAR	**206 000 000.00**	**22 043 925.18**	**10.70%**

The SDBIP target for the quarter has not been achieved. ERWAT has achieved 10.7% against a target of 20%. The SDBIP target for the quarter has not been achieved with a 9.3% negative variance, however the department is putting measures in place to mitigate the challenges stated above. Amongst others, below are the reasons for the poor performance in expenditure for Quarter 1;

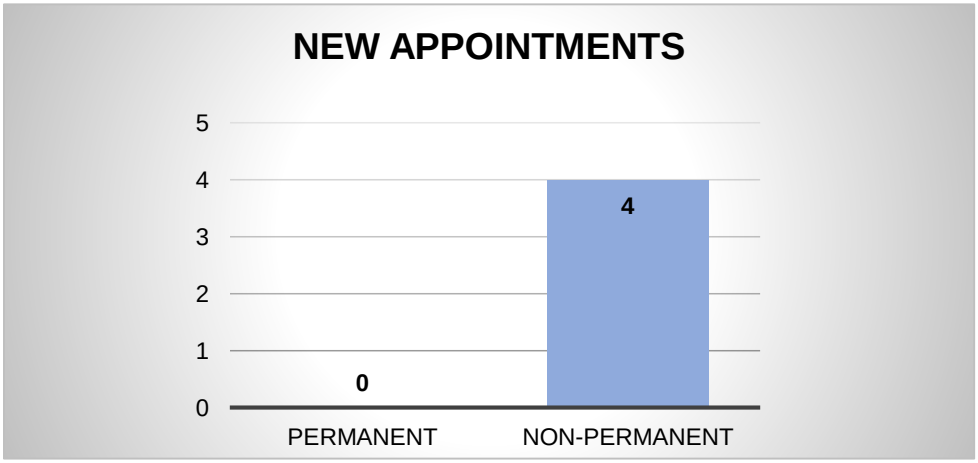
Majority of the industries that supply the contractors were closed during Level 4 and 5 Lockdown. The industries commenced partial operation only under level 3 lockdown. It is anticipated that there will be improvement of supply of equipment and goods in quarter 2 since the country is in Lockdown level 1.

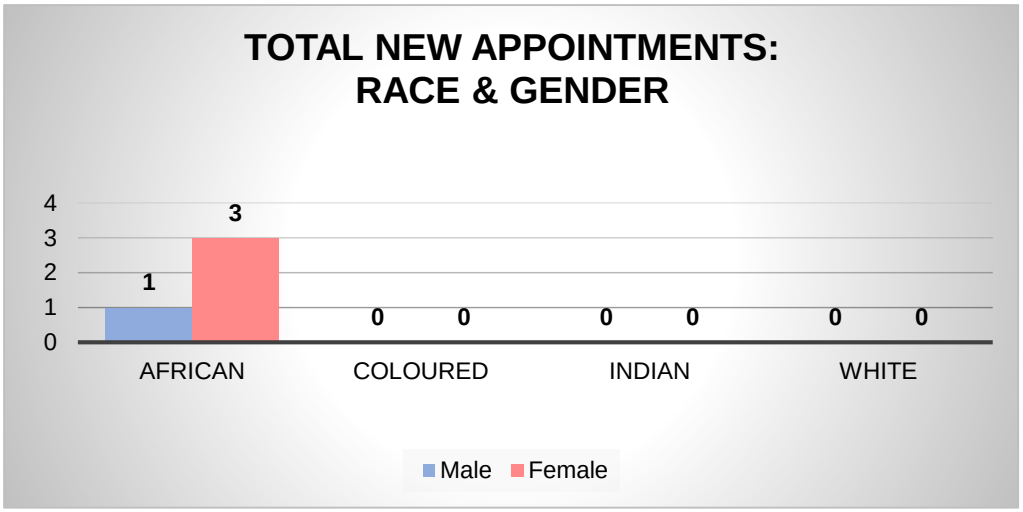
4. Human Resources

Table 7: Staff Movements

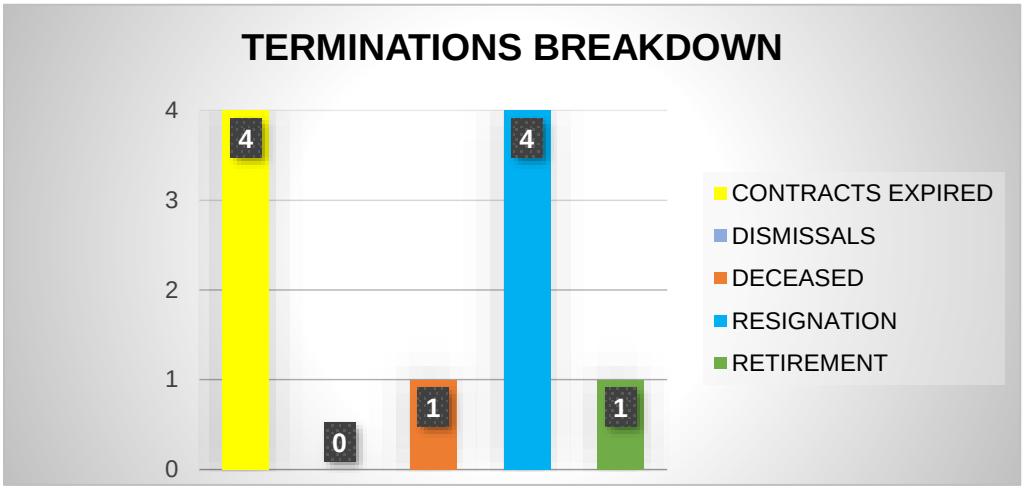
Staff Movements	African		Coloured		Indian		Whites		Total
	Male	Female	Male	Female	Male	Female	Male	Female	
Recruitments	1	3	0	0	0	0	0	0	4
Resignations	2	0	0	0	0	0	0	2	4
Retirements	0	0	0	0	0	0	1	0	1
Contract Expired	2	0	0	0	0	0	2	0	4
Dismissals	0	0	0	0	0	0	0	0	0
Deceased	1	0	0	0	0	0	0	0	1
Promotions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

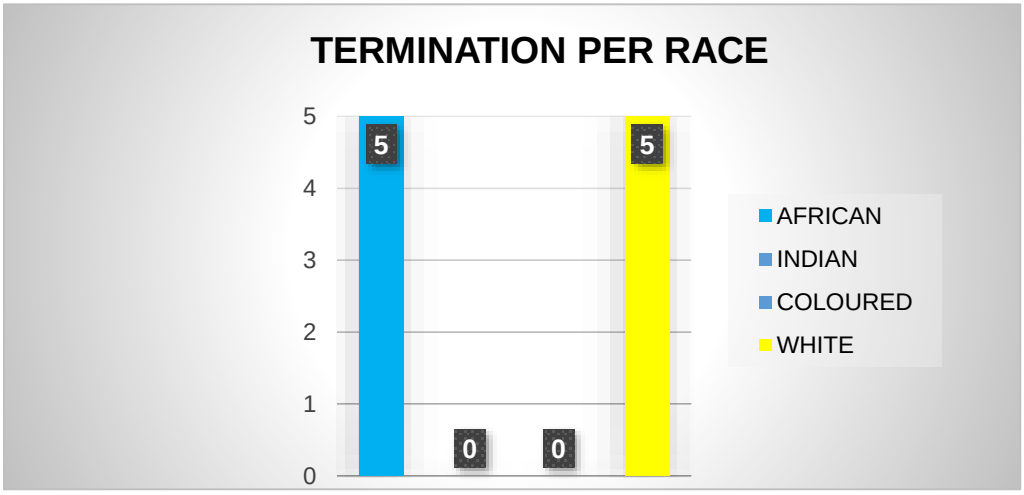
4.1.1 Appointments





4.1.2 Terminations





Status Analysis

During the period under review, 4 employees were appointed. During the period under review, ten (10) employees exited the organisation for the following reasons:

a) contracts expired;
b) resigned for various reasons;
c) 1 employee went on retirement;
d) 1 employee is deceased; and
e) No dismissals

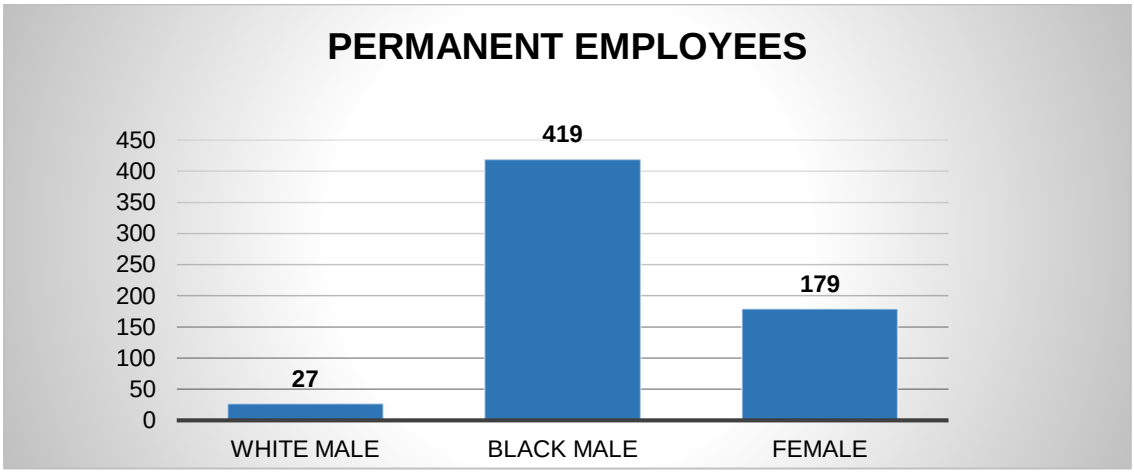
4.2 Overtime Trends

	Quarter 1
Total Hours	50 018.50
Total Cost	7 092 942.03

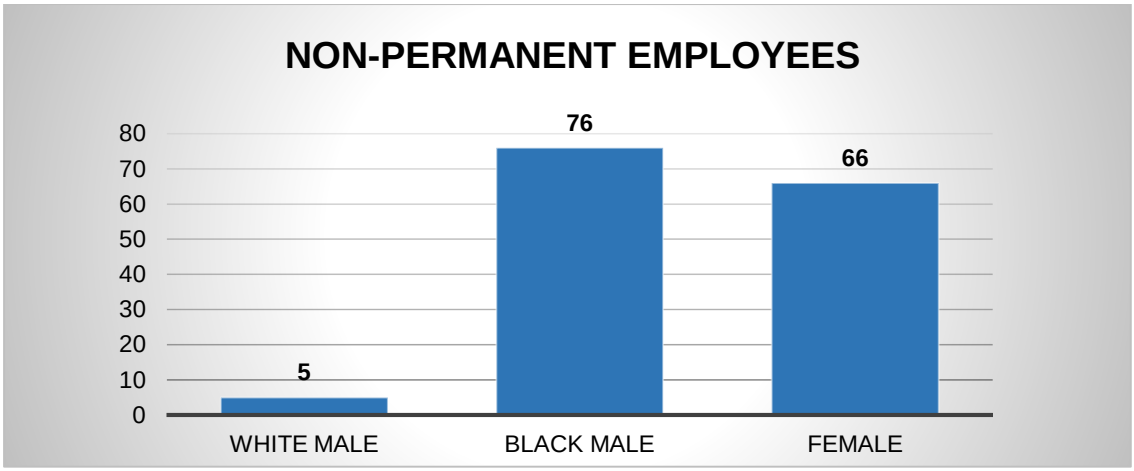
Status Analysis

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

4.3 Employment Equity Demographics

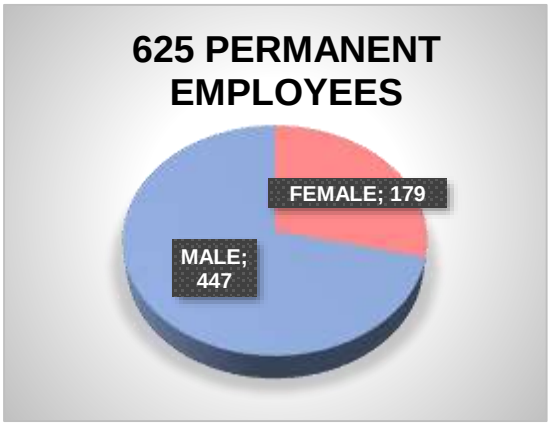


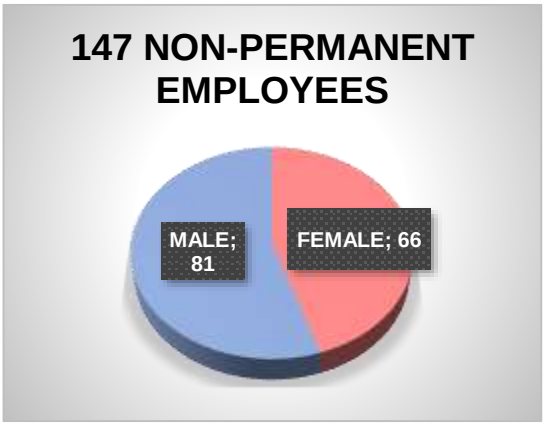
ERWAT has **625** permanent employees;



ERWAT has **147** non-permanent employees.

Status





Analysis

The employment demographics of ERWAT as at 30th September 2020 reflects;

a) Females in both permanent and non-permanent positions within ERWAT account for 245 or 32% of total positions filled.
b) Males in both permanent and non-permanent positions within ERWAT account for 527 or 68% of total positions filled.

Employment Equity Update

A refresher course for the Employment Equity Committee on the EE Plan was intended for Quarter 1 of the 2020/2021 financial year. However, due to COVID-19, the course was rescheduled for Quarter 3 of the 2020/2021 financial year.

4.4 Training and Development

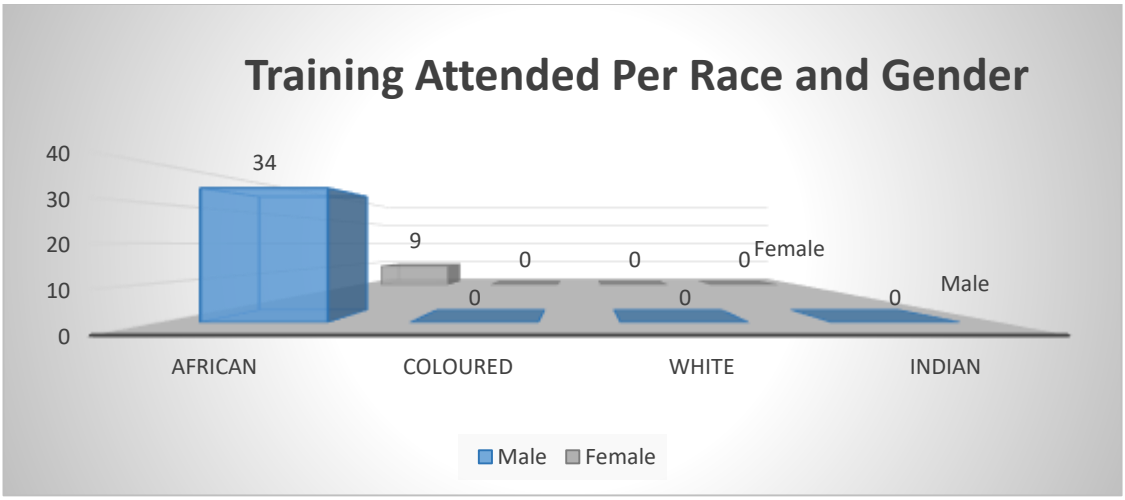
The 2020/2021 Training Plan will resume on 12th of October 2020 with NQF Level 3 and 4 learners (70). Driver training to be rolled out in the month of November and December 2020, likewise training for all the Bid Committees.

Bursary Student

ERWAT currently only have two bursars of which one has complete his Mechanical Engineering National Diploma. A new intake of Bursars are planned for 21/22 financial year.

Training Attended during the Quarter

Chlorine handling training was conducted and Apprentices had attended the Trade Test Preparation and Trade test.



4.5 Percentage of Manpower Cost vs Operational Expenditure.

	Quarter 1
Total Manpower Cost	87 744 101,00
Total Operational Expenditure	191 921 731,00
% of Salary to OPEX	**45.7%**

4.6 Employee Wellness Programme & OHS

ERWAT is constantly ensuring the Wellness of Employees through nominated Wellness Champions who monitors the wellness on all levels through various interventions. ERWAT also has a full-time Occupational Health Nurse which guides the wellness Champions and ensures that they are adequately equipped to provide guidance and assistance as and when necessary to all employees. All wellness activities at ERWAT are both preventative as well as responsive on an ongoing basis.

During the period under review, the following workplace wellness activities were scheduled to take place:

a) Wellness day for DD3, Scientific Services and Head Office; and

Mobile Optometrist visits.

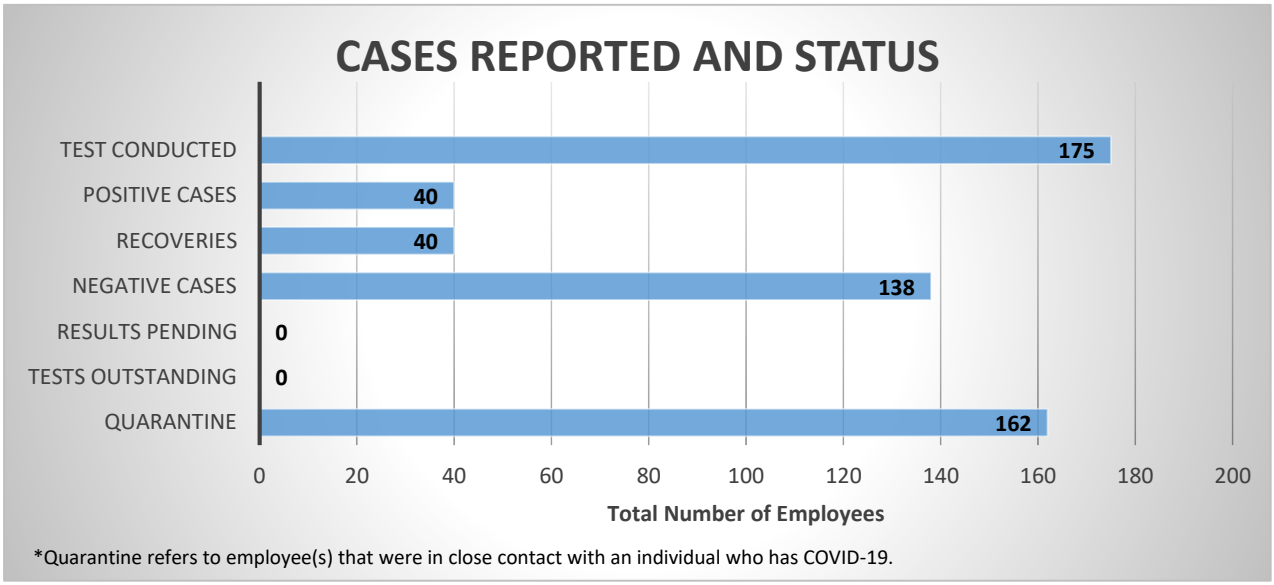
However, the above-mentioned activities could not take place due to the COVID-19 Lockdown regulations, as set by the South African National Health and Government guided by the World Health Organisation (WHO).

4.6.1. Workplace Wellness Program

A **work from home survey** will be conducted. A questionnaire has been drafted and finalised, and will be administered during Quarter 2 of 2020/2021 financial year. The outcome of the survey will determine the overall wellness of the employees that worked from home during the lockdown.

4.6.2 COVID-19 Statistics

The COVID-19 statics below depict the accumulative stats as at 30 September 2020.



*Quarantine refers to employee(s) that were in close contact with an individual who has COVID-19.

4.7 Management of HIV/AIDS in the workplace

ERWAT continues to monitor HIV/AIDS in the workplace and give support through the Wellness Champions.

5. Procurement Practices, Job Creation and Mainstreaming

ERWAT awarded tenders to the value of R870 797.83 from 51%-99% HDI owned companies and R0 to companies with 01% - 50% black female ownership and R0 to companies with 100% HDI ownership for Quarter 1 of the 2020/2021 FY (period: 01 July 2020 to 30 September 2020).

Refer to the table below for a summary of the BEE award practices for the 1st quarter and year to date. 100% of total awards were made to HDI owned businesses between 51-99% ownership for Quarter 1 of the 2020/2021 FY (period: 01 July 2020 to 30 September 2020).

ANNEXURE A - SUMMARY OF AWARDS			
INFORMATION REGARDING BIDS FOR THE PERIOD ENDED 30 SEPTEMBER 2021			
CATEGORY	**TOTAL FOR 1st QUARTER**	**YEAR TO DATE TOTAL**	**% OF YEAR TO DATE TOTAL**
0% HDI / JURISTIC PERSON	-	-	0%
1-50% HDI	-	-	0%
51-99% HDI	870 797.83	870 797.83	100%
100% HDI	-	-	0%
TOTAL	**870 797.83**	**870 797.83**	**100%**
SIZE OF COMPANY			**% OF YEAR TO DATE TOTAL**
LARGE	-	-	0%
MEDIUM	-	-	0%
SMALL	870 797.83	870 797.83	100%
MICRO	-	-	0%
TOTAL	**870 797.83**	**870 797.83**	**100%**
AWARDS MADE TO:			
FEMALES	-	-	0%
BLACK FEMALE 30-100%	-	-	0%
HDI 50-100%	870 797.83	870 797.83	100%
100% HDI	-	-	0%
MILITYARY VETERANS			
PWD			0%
YOUTH	-	-	0%
	870 797.83	**870 797.83**	**100%**
BBEEE SCORE CARD			**% OF YEAR TO DATE TOTAL**
EME	-	-	0%
QSE	-	-	0%
GENERIC	870 797.83	870 797.83	100%
TOTAL	**870 797.83**	**870 797.83**	**100%**
AWARD MADE TO			**% OF YEAR TO DATE TOTAL**
COE BASED COMPANIES	870 797.83	870 797.83	100%
NON COE BASED	-	-	0%
	870 797.83	**870 797.83**	**100%**

6. Risk Management

A robust integration of strategic risk management and strategy setting is critical to the achievement of set strategic objectives. Strategic risk management is a priority for both the executive team and the Board of Directors to ensure the success of ERWAT is depended on how well management and the Board of Directors manage risk effectively. Risk assessment provides an assessment of the relevant and critical risks through a classification and rating system, and mitigating actions and KPIs and targets that can be incorporated in the Balanced Scorecard. The reporting on the risk management into the quarterly reporting process is to ensure that the key risks that may prevent the achievement of the department's strategy are systematically identified and mitigating strategies and actions developed.

The entity has robust process of integrating of strategic risk management and strategy setting is critical to the achievement of set strategic objectives. Strategic risk management is a priority for both the executive team and the Board of Directors to ensure the success of ERWAT is depended on how well management and the Board of Directors manage risk effectively. Risk assessment provides an assessment of the relevant and critical risks through a classification and rating system, and mitigating actions and KPIs and targets that can be incorporated in the Balanced Scorecard. The reporting on the risk management into the quarterly reporting process is to ensure that the key risks that may prevent the achievement of the department's strategy are systematically identified and mitigating strategies and actions developed.

Table 11: ERWAT Top 9 Strategic Risk Assessment

Ref	Risk Title	Impact / Consequences	Current Controls	Risk Mitigation Plan	Progress Quarter 1
		Compromised Service Delivery	Capital Plan & Budget (a) Five (5) Year Capital Expenditure Plan for current and future infrastructure expansion requirements. (b) MTREF 2021-2023 – 2021 FY Budget R206 000	Implementation of Projects in line with the Capital Expenditure Plan - MTREF 2020/2021 (1). Olifantsfontein Refurbishment (2) Vlakplaats: Modification to Flow Diversion (3) Waterval WCW New Aeration Blowers Upgrade. - Replacement of blowers contracts 1 and 2 (cont) yr.2 (4) Replacement of vertical mixers at various ERWAT wastewater care works: (5) Installation and Commissioning of Biological Filters at Rondebult Water Care Works (6) Ancor WCW: Tertiary Filtration Effluent Pipeline/ Pumpstation	Refer to detailed progress report on capital projects Olifantsfontein Refurbishment Project 1. Phase 1b – installing the Plastic Media is 85 % complete Phase 2C - The tender for designing the works is at BSC stage. 2) Vlakplaats: Modification to Flow Diversion - Construction is on-going and to date the project is at 70% physical and 89% has been claimed to date. (3) Waterval WCW New Aeration Blowers Upgrade. - Replacement of blowers contracts 1 and 2 (cont) yr.2 - (4) Replacement of vertical mixers at various ERWAT wastewater care works - The project is at 95% physical progress and 95% has been claimed to date. (5) Installation and Commissioning of Biological Filters at Rondebult Water Care Works - The project is at 88% physical progress and 88% has been claimed to date. (6) Ancor WCW: Tertiary Filtration Effluent Pipeline/ Pump station - The tender for designing the works is currently at BSC stage.
			Wastewater Risk Abatement Planning influence budgeting for all plants.	Submission of risk reports to the CoE, to motivate the approval of additional budget in the MTREF 2021	ERWAT has submitted the risk report to the Department of Water and Sanitation (CoE), the City Risk department for inputs and submission to Council.
			No current control	Development of Engineering Contribution Policy.	The Engineering Contribution Policy developed and tabled at EXCO on the 04 August 2020 for recommendation to the Operations Committee which will convene on the 28th of October 2020.

Ref	Risk Title	Impact / Consequences	Current Controls	Risk Mitigation Plan	Progress Quarter 1
			Five 5 Year Capital Budget Plan financed through USDG	Invite through Expression of interest Technology providers to provide funding mechanism and technologies to address the backlog in WCWs	The tender for Expression of interest for the design, retrofit on existing and or build new biological treatment technologies at various ERWAT water care works, as well as proposed financing solutions is at the advertisement stage.
			Record Business disruptions and Incidents	Tracking of incidents and on a quarterly to assist in planning and decision making	193 Critical Equipment broke down quarter 4 and they increased to 269 in Quarter 1.
			SMT budget tabling to CoE Finance Committee, to support budget request	Investigate other potential sources of funding for. infrastructure (e.g. PPP etc.)	ERWAT has submitted the PPP for Beneficiation funding report to the Department of Water and Sanitation (CoE) for them to comment and submit to the Council.
				Request the city for additional Capital funding from other funding sources/grants within the CoE.	ERWAT has submitted the PPP for Beneficiation funding report to the Department of Water and Sanitation (CoE) for them to comment and submit to the Council.
				A cost reflective tariff to be determined using the financial model in order to motivate for additional funding.	A cost reflective tariff model has been developed. Training on the cost reflective model is scheduled for quarter 2.
			Scheduled Asset Maintenance Plan as planned by Maintenance limited approved budget	Do Scheduled Asset Maintenance Plan as planned by Maintenance limited approved budget	The entity spent on 2% on targeted repairs and maintenance target of R1 879 832 (planned and ad-hoc) for quarter 1. The target was R 19 239 527. This under spent is mainly contributable to scheduled maintenance not being performed in QUARTER 1 due to the COVID-19 lockdown regulation, this was done to evade overcrowding of personnel at the wastewater treatment plants.
			Maintenance Service Master contracts for critical equipment and emergency breakdowns	Review Service Master Contracts for critical equipment and emergencies	To report in quarter 3
			Equipment Condition Assessments	Develop Maintenance Standards and Specifications for critical Equipment's	To report in quarter 3
				Integration of CRMS, Projects Management System; contract management; finance and SCM as part of ERP	Customer Relations Management System – role mapping signed off Project Management System – Functional Requirement Specification complete awaiting signed off Contract Management -

Ref	Risk Title	Impact / Consequences	Current Controls	Risk Mitigation Plan	Progress Quarter 1
ERW2	Inadequate Cash flow to meet business requirements	Service Delivery	Cash-flow projections are created based on assumptions of a uniform monthly expenditure	Implementation of cash-flow projections taking into account the actual departmental cash-flow requirements	ERWAT has been unable to build up its cash reserves during the first quarter of the 2020/2021 financial period due to the C.o.E's non-payment of pump stations.
				Embark on a process to slowly build up cash-flow reserves in order to absorb any unforeseen expenditure which may arise.	ERWAT has been unable to build up its cash reserves during the first quarter of the 2020/2021 financial period due to the CoE's non-payment of pump stations.
			Budget deficiency formal Communicating process to all stakeholders not receiving adequate funds to discharge its mandate	Investigate other sources of funding.(e.g. PPP)	ERWAT has compiled an RFI for the procurement of New Technology which also requests information on alternative funding mechanisms to be put into place. This RFI will be advertised during the second quarter of the 2020/2021 financial period.
				Request the city for additional Capital funding from other funding sources/grants within the CoE	Will be done during the 2nd and 3rd quarter of the 2020/2021 financial period during the adjustment budget process.
				Request the city for additional Operating expenditure funding within the CoE.	This will be done during the 2nd and 3rd quarter of the 2020/2021 financial period during the adjustment budget process.
				A cost reflective tariff to be determined using the financial model in order to motivate for additional funding.	A cost reflective tariff model has been developed. In the 2nd quarter the ERWAT team will receive training on how to further develop and utilise this model to cater to our needs.
			Cost Containment Policy	Develop a plan to implement measures on the Cost Containment Policy by implementing cost savings measures: - Use local venues for Lekgotla and avoid accommodation charges	ERWAT has implemented a cost containment policy. During the first quarter of the 2020/2021 financial period, Zoom was utilised for the Board Lekgotla, both as a measures to prevent COVID-19 transmission as well as a cost saving.
			Cash-flow management by arrangement of partial payment with suppliers in order to stretch available funds.	Ring-fencing of depreciation charges in order to build up cash-reserves to service our debt repayments.	ERWAT has been unable to build up its cash reserves during the first quarter of the 2020/2021 financial period due to the CoE's non-payment of pump stations.
			Service Delivery Agreement	Review of Pump Station SLA and incorporation into the Service Delivery Agreement	Pumpstation Service Level Agreement reviewed and incorporated into the Service Level Agreement

Ref	Risk Title	Impact / Consequences	Current Controls	Risk Mitigation Plan	Progress Quarter 1
ERW3	Inadequate revenue generation to supplement the approved budget	Service Delivery	Costing in terms of existing pay scales.	Review of the Pricing Model	The Entity is in the review process to standardise the tariff models is still in progress for (a). Industrial effluent; (b) leachate, (c) Tankers, (d) Water Care Works Influent; (e) Reclaimed Water - Old tariff currently in use and under review.
			Scientific Service Pricing Schedule/list	Review of sales strategy (consider reducing the profit margin; identify relevant sectors within which to compete)	The plan to source a service provider to assist the Entity with a Marketing Penetration Strategy is at procurement phase.
			Black Broad Based Economic Empowerment	Annual review of BBB EE Compliance.	The process to review the BBB EE Compliance assessment is still at procurement phase.
			Credit management policy Debt recovery procedures	Review of credit management policy to cater collection from government institution	The Credit Management Policy reviewed and approved by the Board of Directors on XXXX
				Develop a policy with regard to cost of sales	Commercial Business Policy is under review to include Cost of Sales and it is anticipated to be approved by quarter 3 of 2020-21
			No current control	Implementation of integrated systems as part of the ERP	Business and functional requirements were developed and signed off. The budgetary requirements for the implementation of the system is targeted for the end of quarter 3 of 2020-21
ERW4	Inability to achieve Capital Expenditure set target	Service Delivery		Integration of Contract Management tool Project Management Tool and Document Management systems as part of ERP	Contract Management module – To report in quarter 4 Project Management System - Document Management System
			Manual Individual Procurement Plans	Compile a Procurement Plan for 2020/2021 financial year.	A Procurement Plan for 2020/2021 compiled and being monitored
			Supply Chain Management Policy	Review of the Supply Chain Management Policy	The review of the Supply Chain Management Policy has not yet started

Ref	Risk Title	Impact / Consequences	Current Controls	Risk Mitigation Plan	Progress Quarter 1
			Annual CAPEX Plan with projected cash flows for each project and monthly CAPEX reconciliation between Finance and Projects	Prepare projected cash flows in budget tool format per vote number (for multi-year projects & new projects starting in the next budget period) prior to submission of draft budgets. (February every year)	The action plan has not yet started. Scheduled for quarter 2 and 3
			Invoice Tracking Tool	Each department to incorporate Invoice tracking at departmental meetings (No of invoices received, Age and status) - Grant all user departments access to GRN to ensure capturing at the time of receipt of goods	The action plan has not yet started. Scheduled for quarter 2 and 3
			Central email to fast track invoices received	Implementation of a central invoice receipt mail. invoice@erwat.co.za	Action plan has not yet started. Scheduled for quarter3
			Community Liaison Officer Appointed through ward councillors for community projects.	Engage CSR office prior to commencement of construction project. (CSR plan to include Projects)	There is no further action as there are no new projects to be rolled-out in the 2020/2021 financial year due inadequate budget allocation
			Insurance and Security Services	Investigate insurance coverage against financial loss for damages during projects by ERWAT	The action plan has not yet started. Scheduled for quarter 2nd and 3rd quarter of the 2020/2021 financial period during the adjustment budget process.
ERW5	Inadequate preparedness in the event of an emergency/disaster.	Service Delivery	12 Wastewater Care Works have either a Balancing Dam, Emergency Dam, Water Flow Bypassing System	Flow modification and balancing dam project at Vlakplaats	Vlakplaats: Modification to Flow Diversion - Construction is on-going and to date the project is at 70% physical and 89% has been claimed to date.
			Geo tech studies conducted (every three years)	Develop a Geotechnical Studies Standard Operating Procedure	Action plan not started
			Business Continuity Management Policy	Review BCM Strategy	The action has not yet started. Scheduled for quarter 3 after the Covid 19 era revision of Business Impact Analysis, BCM Risk Assessments and Business Recovery Plans
			Incident Management Protocol (Emergency Response Plan)		

Ref	Risk Title	Impact / Consequences	Current Controls	Risk Mitigation Plan	Progress Quarter 1
			BCM Risk Assessments for Water Care Works and Support Services	Review of BCM Risk Assessments of all departments	BCM Risk Assessment reviews due to Covid 19 was conducted for the 19 wastewater care works, Infrastructure and Planning, Commercial Business. The remainder of the support services is planned for quarter 2.
			BCM Business Impact Analysis	Review of Business Impact Analysis	Business Impact Analysis review due to Covid 19 was conducted for the 19 wastewater care works, Infrastructure, Commercial Business. The remainder of support services is planned for quarter 2.
			Critical Supplies Register for core business	Update Business Recovery Plans for Supply Chain Management	The action plan has not yet started.
			Business Recovery Plans for IPAP, GLC, Operations, Commercial Business	Review of Business Recovery Plans	The action plan has not yet started. Scheduled for quarter 3
			BCM Steering Committee	BCM Communications and Awareness	Awareness through internal flash and monthly BCM meetings.
			BCM Infrastructure Condition Assessments	Conduct Infrastructure Condition Assessments for Pump stations	The Pump station condition assessment draft reports were under review in
			Record Business disruptions and Incidents	Tracking of incidents and on a quarterly to assist in planning and decision making	193 Critical Equipment broke down quarter 4 and they increased to 269 in Quarter 1.
ERW6	Potential loss of key skills		Recruitment Plan	Implementation of 2020/21 recruitment plan	Phase 1 – Positions were advertised internally on the 22nd of July 2020 in line with the recruitment plan
			Organisational Structure Re-design	Review of the Competency Based Progression Plan	Competency based progression plan for the core departments (Operations, Scientific Services and Maintenance) has been updated and the support departments plans are in progress.
			6-year Training and Development Plan	Implementation of 2020/21 annual training plan	Procurement has been completed and training will be rolled out in the months of November and December.
			Employee Benefits Policies	Review of Human Resources Policies	Policy have been reviewed and sent to Board for approval. Policies revisited in September to further merge the policies as per City Risk Committee request.

Ref	Risk Title	Impact / Consequences	Current Controls	Risk Mitigation Plan	Progress Quarter 1
ERW7	Potential delay in supply and delivery of goods/services		Contractor Performance evaluation	Develop a Standard Operating Procedure for continuous defaulting bidders/ suppliers for RFQs and web-tenders.	Action plan not yet started.
			Supply Chain Management Policy and General Conditions of Contracts	Develop a standard operating procedure on Non-compliant and poor performing services providers In-house training	Action plan not yet started.
ERW8		Service Delivery	CAPEX Plan	Replacement of the FIA(Flow Injection Analyser)	The FIA analyser will be replaced by a Discreet analyser. The procurement of the Discreet analyser is at the bid evaluation stage.
			Scheduled maintenance for Scientific Services equipment	Maintenance to maintain the equipment as per schedule maintenance	To Report in quarter 3
			Internal Inspections and Assessments	Refurbishment of the HVAC to restore to its operational state (DESIGN)	HVAC system was refurbished in June 2020
			External Audits	Replacement of the FIA valves & flow cells	The replacement of FIA valves to replace the valves is on track. See attached tender document being evaluated (ERW202009/TNDR-009).
			Inter-laboratory studies	Replacement of pH and conductivity meters	Additional pH and conductivity meters were purchased in June 2020. Action plan completed
			Standard Operating Procedures and Quality Manual	Replacement of objectives lenses for microscope	To report in quarter 3
ERW9	Potential Loss of, and Unauthorised Access Critical Information	Information Security	Information, Communication and Technology Policy	Develop Document Management Policy	SOPs for documents and records management should be defined pending the DRMS policy definition and system implementation
			ERWAT Public Drive	Implement Document Management System	Implementation of the DMS is part of the MSCOA ERP implementation, the CoE has halted the implementation of the DMS as the identified DMS does not meet the MSCOA requirements. CoE will advise on a way forward

Ref	Risk Title	Impact / Consequences	Current Controls	Risk Mitigation Plan	Progress Quarter 1
			Computer Systems are Password Protected	Develop Protection of Personal Information Policy	Draft Policy to be tabled at the Labour Forum
			Mimecast for mail protection against viruses and malware	Raise awareness on the risk of accessing untrusted websites	Action not yet started. Scheduled for quarter 2.
			Forti-Gate Firewall (automatically restricts access to untrusted websites) for protection of ERWAT system accessed through local network	Procurement and Implementation of encryption systems on ERWAT laptops, USBs and hard drives	Antivirus scans is enabled for external devices.
			No control	Raise awareness on the risk of potential loss of sensitive information	Action plan has not yet started. Scheduled for quarter 2
			ICT Policies and Procedures	Include the use of other communication platforms in the information Security Standard Operating Procedure. (RAP5.1.1)	Action has not yet started. Scheduled for quarter 3
			New employees awareness through induction.	Awareness through news flash	Action plan has not yet started. Scheduled for quarter 2
			Information Security policies and procedures.	Review the ICT information security policy and Procedures	Policy was updated and will be presented to management in quarter 2 for inputs and recommendations to the Board.

Emerging Risks (Narrative)

There were no new emerging risks for the period under review. It is anticipated that new risks will emerge during the Waste Water Risk Abatement Plans risk review that is scheduled to take place in quarter 2. The Wastewater Risk Abatement Plans review are at operational but key to the risks that face the entire sewer network system.

7. Legislative (only if applicable to your department)

The governance and management of compliance to key legislature is critical to ensuring that the Entity has an effective system of regulatory compliance in place. The Entity has conducted Compliance Risk Management against six key legislature and ensure that there are compliance risk management plans in place

No	Key Legislation	Major Challenges
1	Companies Act 71 of 2008	The challenge in the companies' act is the long turnaround time it takes to finalise the Service Delivery Agreement between the Entity and the City.
2	National Water Act 36 of 1998	Compliance to the water quality is key to ensure that the entity does not contravene the water use licences as issued by the Department of Water and Sanitation. Old infrastructure poses a challenge as critical equipment frequently breaks downs and there is not adequate budget for maintenance.
3	Municipal Finance Management Act 56 of 2003	Budget cuts and late payments by the City poses a challenge in the smooth operation of the entity as it becomes difficult to pay service providers on time. This has a potential to affect the supply of critical supplies such as chlorine and security services.
4	National Environmental Management Act 107 of 1998	Frequent break down of critical equipment has a negative impact on the environment and the ecosystem of the rivers as pollution becomes unavoidable. The unlinking of the sludge drying beds result in seepages of waste water underground.
5	Occupational Health and Safety Act 85 0f 1993	Covid 19 places a greater responsibility on the entity to keep all employees safe in line with the government regulations. Financial challenges place a greater on ensuring that the supply of goods and services is not interrupted by non-payment

8. Key Audit Matters and Progress

As of 30 September 2020, there has not been significant movement on the Internal Audit or External Audit processes for the 2020/2021 financial period, which is primarily due to the revision of timelines due to the state of disaster currently in effect in South Africa.

The Internal Audit Program is expected to commence in the 2nd quarter of the 2020/2021 financial period, while the 2020/2021 Regularity audit conducted by the Auditor General South Africa, is expected to commence during November 2020.

Due to the revision in timeframes it is expected that the 2020/2021 audit will be finalised during the 3rd quarter of the 2020/2021 financial period.