

EASTERN WATER AND SANITATION COMPANY



ANNUAL REPORT

2022



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1. COMPANY BRIEF

We are a commercial utility company providing water and sanitation services to urban and peri urban areas of Eastern Province with an estimated population of 350,574, Chipata City alone constitutes about 51% of the business with an estimated population of 209,163

Eastern Water and Sanitation Company Limited (EWSC) was incorporated on 12th May 2008 under the Companies Act CAP 388 of the laws of Zambia to provide water supply and sanitation services to the urban and peri-urban population in Eastern Province. The company commenced operations effectively on 20th January 2009. EWSC has been licensed by the National Water Supply and Sanitation Council (NWASCO) as the regulator.

The company operates under the provision of the Water Supply and Sanitation Act No. 28 of November 1997. The Act enables the company to operate on a commercial and viable basis. EWSC is wholly owned by the eight local authorities in Eastern Province holding shares on pro-rata basis.



Water supply to the province comes from two primary sources, ground water (Commercial Boreholes) and surface water (dams) with four districts being supplied by ground water and four other districts being supplied by surface water. The average daily production for the province is 18,000 m³ with service coverage of 93.5%.

Eastern province remains greatly challenged with sanitation with only Chipata City having a sewerage system. The majority of the province is currently on onsite sanitation. EWSC has continued looking for cooperating partners in order to establish sewerage systems in all the districts in the province as well as improve the existing sewerage system in Chipata.

Having evolved from a small department within the local authorities, the company has continued to grow with its mandate revised to include rural areas. As of December 2022, the Company had 2,455 house hold connections. The customer base has been growing steadily at a rate of 10% per annum. The growth in size and mandate has also coincided with improvement in company performance. In the last 4 years, EWSC has been ranked amongst the top four (4) best utilities in Zambia consecutively. In 2022, the Company was ranked as the Best Performing Water utility Company in Zambia. EWSC has also severally been recognized for its high standards in water quality that have ranged above the required standard of 95% set by the World Health Organization (WHO) and the Zambia Bureau of Standards (ZABS).

2. VISION AND MISSION

VISION

- “To be a model of excellence in delivering sustainable water supply and sanitation services for all”

MISSION STATEMENT

- “To up lift the living standards of all our customers through the exceptional provision of safe, adequate, affordable and environmentally friendly water supply and sanitation services”

CORE VALUES

- Integrity
- Excellence
- Accountability
- Innovation
- Team work
- Integrity

STRATEGY

- To manage EWSC as a commercially viable water supply and sanitation service provider which is environment and customer focused

Our Core Values

- **Excellence:** We shall strive to be outstanding in all that we do.
- **Teamwork:** We shall foster collaboration amongst staff to enhance efficiency.
- **Innovation:** We shall encourage creativity to develop and implement new operational procedures and products to enhance efficiency.
- **Integrity:** We shall be transparent and morally upright in all our dealings.
- **Accountability:** We shall willingly accept responsibility for all our actions
- **Equity and Inclusivity:** We shall treat all equally regardless of their social status and or gender to ensure that none are excluded

3. EWSC FACT SHEET

EWSC FACT SHEET



5 STATEMENT ON CORPORATE GOVERNANCE

Eastern Water and Sanitation Company Limited is committed to excellence in corporate governance, transparency and accountability. This is essential for the long-term performance and sustainability of our Company, and to protect and enhance the interests of our shareholders and other stakeholders while conducting its core business in an ethical manner.

Adherence to principle tenets of good corporate governance such as accountability, transparency, fairness and collective responsibility is an epitome of key corporate decisions made by the organization's Board of Directors and management.

With the above understanding, EWSC executed its mandate with a full Board of Directors in place for the year beginning 1st January, 2022 to 31st December, 2022. The Board of Directors effectively and efficiently executed duties by virtue of its mandate through its committees, namely, *The Finance and Administration Committee, The Audit and Risk Management Committee, The Technical Committee and The Business Development and Investment Committee.*

The Board ensured that through its operations, the organization was well supported through key decisions and guidance on corporate governance. Some of the key decisions made during the year were the following:-

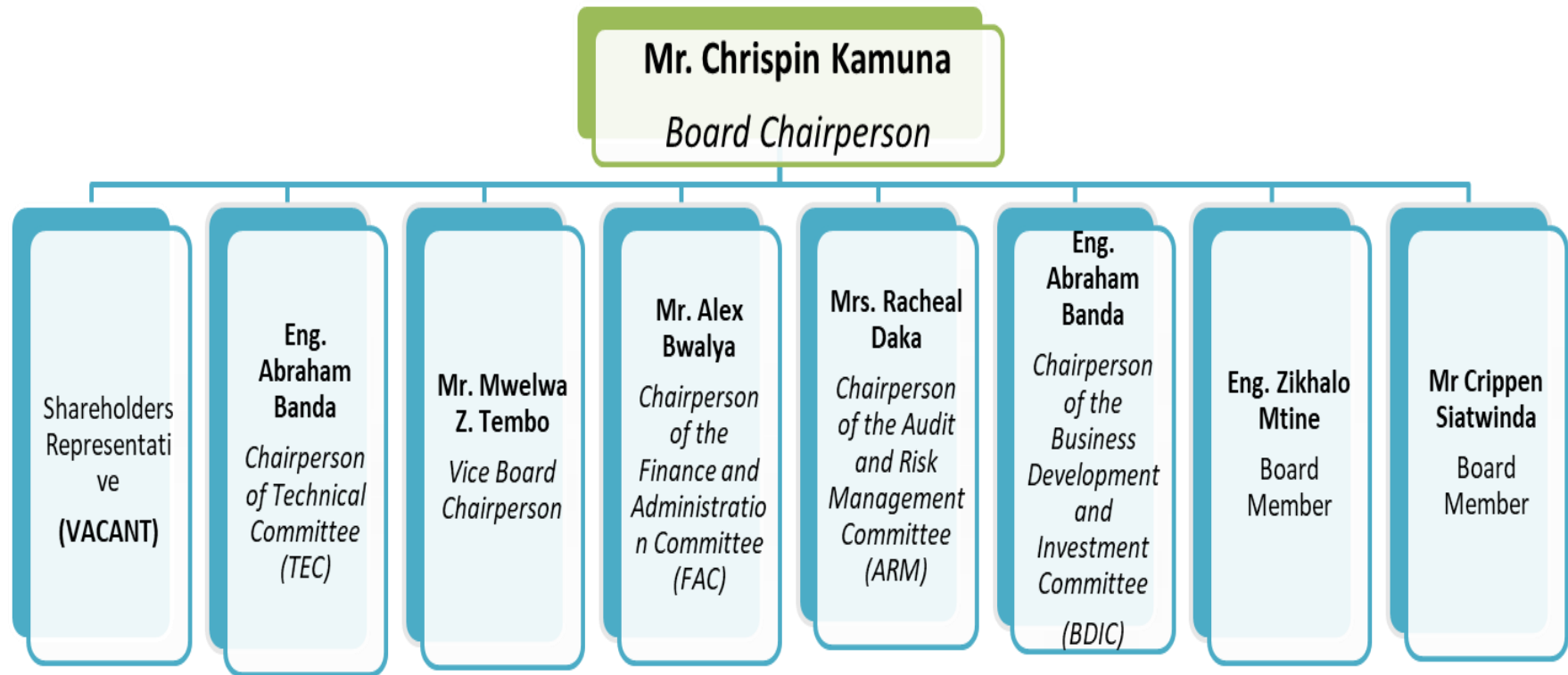
- i. Ratification of the 2022 corporate budget
- ii. Ratification of the implementation of the harmonized and rationalized conditions of service for unionized and non-unionized staff as per government directive.
- iii. Approval of the request for an Overdraft facility
- iv. Approval of the 2022 Business Plan
- v. Approval of the Non-Revenue Water Management Policy and Strategic Plan
- vi. Approval of the Debt Management Policy
- vii. Approval of the request by management to write off bad debt in the tune of ZMW 726,076. 83
- viii. Approval of Internal Audit 2023 to 2025 Strategic Plan
- ix. Approval of the EWSC standard Performance Appraisal Tool

The Board ensured that trust with key stakeholders, the community, and cooperating partners was enhanced for an assured sustainable business relationship of the organization with such. Through proactively embracing corporate governance practices, the Board was able to provide a clear idea of a company's direction and business integrity while at the same time focusing on efforts aimed at creating long-term financial viability, opportunity, and returns for the organization.

On a sad note however, the organization lost one Board Member by the name of Ms. Jenge Noreen Chilambo in the course of the year and the organization remains grateful for her immense contribution. May her soul continue resting in eternal peace.

COMPANY SECRETARY

6 BOARD OF DIRECTORS – ORGANOGRAM



7. CHAIRPERSON'S STATEMENT



Dear Shareholders,

I am delighted to present the Annual Report and the Financial Statements for Eastern Water and Sanitation Company Limited for 2022 financial year. As you may be aware, my fellow Board Members and I have a huge responsibility to safeguard Eastern Water and Sanitation Company Limited's success and sustainability in the short, medium and long term for the benefit of all stakeholders. During the 2022 Financial year, we endeavored to execute this responsibility by exercising independent judgment and due care.

Year Under Review

May I take this opportunity to underscore the challenges as well as the milestone achievements the organization recorded during the year under review.

The business operating environment was characterized by a high cost of service provision arising from increase in the cost of inputs such as chemicals, electricity and maintenance materials, which was never matched with tariffs. The company was again just like in the previous year affected by the non-approval of a revised tariff in order to have a cost reflective tariff in place. It is our hope that going forward, a positive consideration on tariff adjustment will be made, reflective of the cost of doing business.

The company was equally hit with increased network infrastructure failure due to old age particularly in Chipata City. The other major challenges faced in the year under review in addition to liquidity, included failure to meet Operations and Maintenance Costs. Our Operation and Maintenance Cost Coverage stood at 64% way below the sector's benchmark of 100%. Non-Revenue Water continued to be high, standing at a corporate average indicator of 46% as opposed to the previous year's 43% against the sector's acceptable benchmark of 25%. This was mainly caused by the dilapidated network infrastructure in Chipata and the calcification of calcium in Petauke district. Encroachments of water catchment areas remained a challenge and a serious threat as well and it is the organization's plea to your our able shareholders to assist the organization with a speedy process of title acquisition of all its properties found in your respective municipalities to safeguard these critical assets for the good of the general public.

The financial picture of the organization remained unfavorable as highlighted by the audited financial statements which revealed that the organization accumulated losses of ZMW 92,416,848 during the year ended 31 December 2022 compared to ZMW 65,162,423 during the previous year, and as of that date, the company's current liabilities exceeded its total assets by ZMW 71,169,698. The organization however continued advancing various efforts aimed at growing the business in order to address the liquidity challenges which may soon start bringing in some positive outcomes aimed at transforming the current outlook.

However, despite these pitfalls, the organization did manage to register some huge milestones in its operations and efforts to remain afloat. The organization grew its customer base from 25, 143 in the previous year to 27, 616 in 2022 which translated into a 10% growth. This ultimately translated into some growth in water service coverage from 92% in the previous year to 94% in 2022. The growth in customer base is a clear indication of the direction and vision the company has embarked on of growing the business aimed at improving the financial trajectory, but at the same time at expanding its service coverage mandate in the provision of critical services of water and sanitation to the general public as basic human requirements. The company's sanitation coverage remained almost the same with a marginal increase of 0.03% from the previous coverage of 52%. Furthermore, total billing, i.e., both water supply and sanitation increased by 3% from ZMW33, 515, 487 recorded in 2021 to ZMW34, 386,420 in 2022.

In terms of other critical performance indicators, the organization maintained its water quality at 100% and no serious public matter of water contamination was recorded or received. The organization also maintained a corporate average of 20.5% hours of water supply to the general public which was above the regulator's benchmark of 18%. These are some but not all the positive milestones recorded in the year under review.

In view of the milestones achieved, our organization was awarded a prize of the Best Performing Water Utility in the country out of a total of eleven Water Utilities from having come out second best in the previous year. This achievement did not come by chance but it is a demonstration of the efforts and hard work of all of us here present and our determination to transform the company into a model of excellence in service delivery. This deserves applause.

Suffice to mention is that the company also continued to register some positive strides and activities on projects aimed at growing the business and improving service delivery such as the Kacholola Water Supply and Sanitation Project, Chipata Urban Water Supply and Sanitation Project, Sinda Urban Water Supply and Sanitation Project, Nyimba Solar Project, and Chama Water Improvement Project among others.

Acknowledgments

I would like to extend my sincerest gratitude, respect and appreciation to all stakeholders for their valued support and confidence in the Company's services and operations. Also, I would like to recognize and appreciate Government through the Ministry of Water Development and Sanitation for the support and guidance given to the company. Allow me to also appreciate our regulator the National Water Supply and Sanitation Council for performing their regulatory role diligently throughout the year and their unwavering support in a number of issues. As a Company we would like to express our gratitude to all our customers for their unwavering support and trust. We remain committed to improving our services to meet your expectations.

To my fellow Board members and trusted advisors of our Company, I am honored to be leading such a team of very committed people. Eastern Water and Sanitation Company Limited, as a united front has embarked on an ambitious path of strategic growth in pursuit of delivering improved shareholder value by applying our organizational values and ethical behavior in the way we conduct business

Chrispin Kamuna
Chairman of the Board

7. SENIOR MANAGEMENT TEAM



Eng. Aaron Mulinda
Managing Director



Charity Phiri Bweupe
Human Resource and
Administration Manager



**Eng. December
Banda**
Technical Manager



Silas Luhanga
Finance Manager



Judy Nsanganyi
Acting Commercial
Manager



Enock M. Phiri
Internal Audit and Risk
Manager



**Esq. Harrison
Mulumbwa**
Legal Counsel



Caren Mbewe
Assistant Public
Relations Officer



Eng. Douglas Sinkololwe
Infrastructure Planning &
Development Manager



Chisanga M Maboshe
Information and
Technology Officer



Gloria Chabu
Procurement and
Supplies Officer

8. MANAGING DIRECTOR'S REPORT

9.1 Financial Performance Review

Water and Sanitation income for the year ending 31st December 2022 was ZMW38.756 million, being 1.17% above 2021, largely driven by a growth in the number of domestic new water connections and marginal increase in consumptions.

Operating loss for the year was (ZMW27.221 million) compared to (ZMW23.530 million) operating loss in 2021. This is mainly driven by higher operating expenses which increased from ZMW75.603 million in 2021 to ZMW81, 680 million in 2022 representing an increase of 8.03%.

Escalation of costs has continued to remain a major challenge in the business with increases during the year under review without a corresponding increase in revenues due to non-approval of water and sanitation tariffs, compounded by higher than planned inflation. In addition, the extensive depreciation of the Kwacha against all currencies had also further adversely affected direct costs specifically under operations and maintenance costs.

Prospects

The Company expects to remain steadfast in ensuring that it continues to provide a safe operating environment. The company will continue to prioritize new connections and fight in reduction of Non-Revenue Water to ensure that there is increased access to clean and safe water. Also ensuring that cost containment strategies are implemented at all levels, this will reduce the risk of further escalation of costs and pressure on operating profits.

STATEMENT OF COMPREHENSIVE INCOME

	2022 ZMW	2021 ZMW
Revenue	38,756,375	38,308,526
Operating Loss	(27,221,584)	(23,530,300)
Finance costs	(32,840)	(9,520)
Income tax expense	-	
Deferred Tax	9,178,992	(8,228,766)
Total Comprehensive loss for the year	(18,075,432)	(31,768,586)

Table 1. Statement of comprehensive income

SUMMARIZED STATEMENT OF FINANCIAL POSITION

	2022 ZMW	2021 ZMW
Assets		
Property, plant and equipment	198,464,787	213,139,298
Intangible assets	128,991	59,427
Deferred Tax Asset	11,499,019	2,310,842
Inventories	12,730,818	4,737,468
Trade and other receivables	5,273,380	5,010,919
Cash at bank and in hand	13,932,545	811,813
Total Assets	242,029,540	226,069,767

Table 2 Summarised Statement of financial position

Equity and Liabilities

Share capital	250,000	250,000
Share premium	22,905,982	22,905,982
Revenue Reserves	(83,237,856)	(65,162,423)
Capital grants	202,017,770	187,511,642
Provision for retirement	42,917,938	33,844,399
Current liabilities	58,203,023	42,720,167
Total equity and liabilities	242,026,540	226,069,767

Table 3 Equity and Liability

Financial Indicators

INDICATOR	2022	2021
ROCE	(18%)	(18%)
ASSET TURNOVER	18%	18%
GROSS PROFIT MARGIN	59%	58%
CURRENT RATIO	0.25	0.23
OPERATIONS AND MAINTENANCE COSTS COVERAGE BY BILLING	73.2%	63%

Table 4 Financial Indicators

9.2. Sales And Revenues (Commercial)

9.2.1 Billing and Sales Revenue (Kwacha)

The total billing for water supply and Sanitation services was ZMW 34.4 Million for the FY-2022 compared to a total billing of ZMW33.5 Million in the previous year (2021). This represented a sales revenue growth of ZMW0.9Million (or 3%). Below is the table indicating the sales revenues. The drop under billing for sanitation was because our vacuum tanker was not operational.

BILLING REVENUES (ZMW)	UNIT	2022 Financial Year	Previous Year (2021)	Billing Increase	Percentage Increase
Billing for Water Supply	Kwacha	33,389,101	32,251,484	1,137,617	4%
Billing for Sanitation	Kwacha	997,319	1,264,003	-266,684	-21%
Total Billing for Water Supply and Sanitation Services	Kwacha	34,386,420	33,515,487	870,933	3%
Water Consumption per Capita per day	l/c/d	26	26	-	0%

Table 5. Sales Revenue

9.2.2 Total Water And Sewer Billing (Kwacha)

Billing Revenues-Variance Analysis (2019-2022)

Table 6. Billing Revenue-Variations Analysis 2019-2022

Year	Actual Results (ZMW)	Strategic Plan Target	Actual Results	Difference
2019	29,136,149	15%	5%	-10%
2020	31,465,245	15%	8%	-7%
2021	33,515,487	22%	7%	-15%
2022	34,386,420	22%	8%	-14%

9.2.3 Debt Management And Revenue Collections

Corporate performance on revenue collections is generally measured by collection Efficiency.

Collection Efficiency is the proportion of billed amounts that is collected. This performance indicator considers collections against billing for Water supply and Sewerage Services only and excludes revenue /Charges and collections for all other services and Revenue Sources.

The Total Collection Efficiency for the year under review was 101%. This Collection efficiency meant EWSC collected the equivalent of the total billed revenues for the FY-2022.

Year	EWSC Strategic Plan Target	Actual Results	Variance
	%	%	%
2019	100	101	1
2020	100	107	7
2021	110	127	17
2022	110	102	-8

Table 6 Collection Efficiency Trends-Performance vs Benchmark

COLLECTION EFFICIENCY (2019-2022)

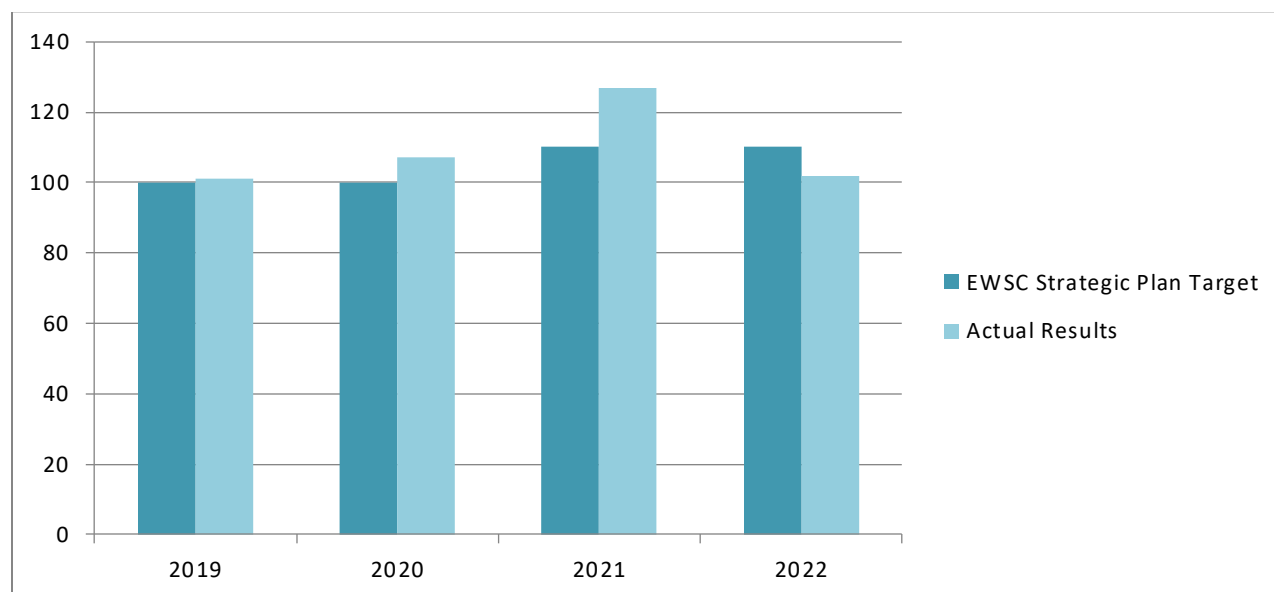


Figure 1 Collection Efficiency

9.3. Customer Service Operations

9.3.1. Debtors Position – 2022

During the year under review, debt reduced under all categories except for domestic customers as shown in the table below:

CATEGORY	2019	2020	2021	2022	VARAINCE FROM PREV. YEAR (2021)	VARAINCE FROM PREV. YEAR (2021)
	ZMK	ZMK	ZMK	ZMK	ZMK	%
Domestic	5,942,620.11	8,864,865.74	7,419,036.30	8,067,112.86	648,076.56	8.7
Commercial	1,794,602.29	2,357,963.44	2,202,715.37	1,824,528.96	- 378,186.41	-17.2
Kiosk	429,411.86	534,984.45	729,041.34	657,527.05	- 71,514.29	-9.8
Government	5,952,594.32	3,607,796.72	2,165,483.09	1,551,315.09	- 614,168.00	-28.4
GRAND TOTAL	14,119,228.58	15,365,610.35	12,516,276.10	12,100,483.96	415,792.14	-3.3

Table 7 Debt Reduction

9.3.2. Metering Service Operations

Metering Services Section of Commercial Operations is charged with the responsibility to ensure that each customer connection is metered, and all meters are in good working order. The Section installs water meters at premises of new customers, repairs and maintains faulty meters, replaces damaged water meters, ensures accuracy of all water meters. Metering is necessary for measuring the amount of water consumed and thus sold to consumers. A key indicator here is **METERING RATIO**.

This is the proportion of the metered connections compared to the total number of connections (Water and/or Sewerage) in distribution network. In 2022, EWSC maintained Excellence in metering with Metering Ratio Maintained at 100%. Metering ratio is both a sector performance indicator and a tariff condition issued by the NWASCO and is critical strategy in managing Non-Revenue Water.

9.3.3 Customer Complaints Management

One of the key functions of the Commercial Department is Customer Management. The department is responsible for handling the more than 25,000 customers/Consumers on a daily basis and ensuring that they are satisfied with the treatment, goods, works and services they receive from EWSC. All customers who are not satisfied with any of these aspects, or any other matter, have the right to complain and be heard, through an established process. Many parameters are used to assess and measure service levels and customer satisfaction, three (3) of these parameters include Supply hours, Water Quality and complaint resolution rate. EWSC signs Service Level Agreement (SLAs) and Service Level Guarantee (SLGs) to safeguard the interests of all stakeholders, especially consumers, the Utility and Government.

Statistics on Complaints are important in assessing customer satisfaction regarding the service received from the Company. A satisfied customer is a better business partner and is more likely to pay the bills when they fall due. Customer complaints are also subject to timeframe prescribed in SLAs and SLGs. EWSC performance on adherence to SLAs/SLGs was fair in FY-2021 and more needs to be done for better service delivery. At least 84% of customer complaints were resolved and approximately 65% of customers were satisfied with Company service during the period under review (FY-2022).

COMPLAINTS RECEIVED AND RESOLVED	Unit	FY-2019	FY-2020	FY-2021	FY-2022
Total Number of Complaints	No.	10,428	6,467	8,694	9361
Total Number of Complaints resolved	No.	8,792	5,427	6,617	7846
1) COMPLAINTS RESOLUTION					
EWSC Strategic Plan Target- Resolution Ratio	%	98%	98%	90%	92%
Actual Total Resolution Ratio	%	84%	84%	76%	84%
PERFORMANCE VARIANCE		(14%)	(14%)	(14%)	(8%)
2) COMPLAINTS PER 100 CONNECTIONS					
EWSC-SBP Target- Complaints/100 Connections	%	10%	5%	25%	23%
Actual Complaints per 100 connections	%	48%	27%	35%	
PERFORMANCE VARIANCE		(38%)	(22%)	(10%)	

Table 8 Complaints Management

The matrix of the Customer Complaints in FY-2022

- The number of customer complaints in FY-2022 increased by 7% compared by FY-2021
- The overall rate of complaints resolution reduced by 8% when compared with FY-2021

9.4 Customer Base

In the Past three years (FY-2020/2022), the total customer base grew 5% in 2021 whilst in 2022 the growth doubled to 10%. This is as a result of the number of new connections being added with time and the demand due to increasing population and expansion of operating environment

9.5 Customer Metering

INDICATOR	2020	2021	2022
Registered Connections	23,963	25,143	27,616
Metered Connections	23,963	25,143	27,616
Metering Ratio	100%	100%	100%

Table 9 Customer Metering

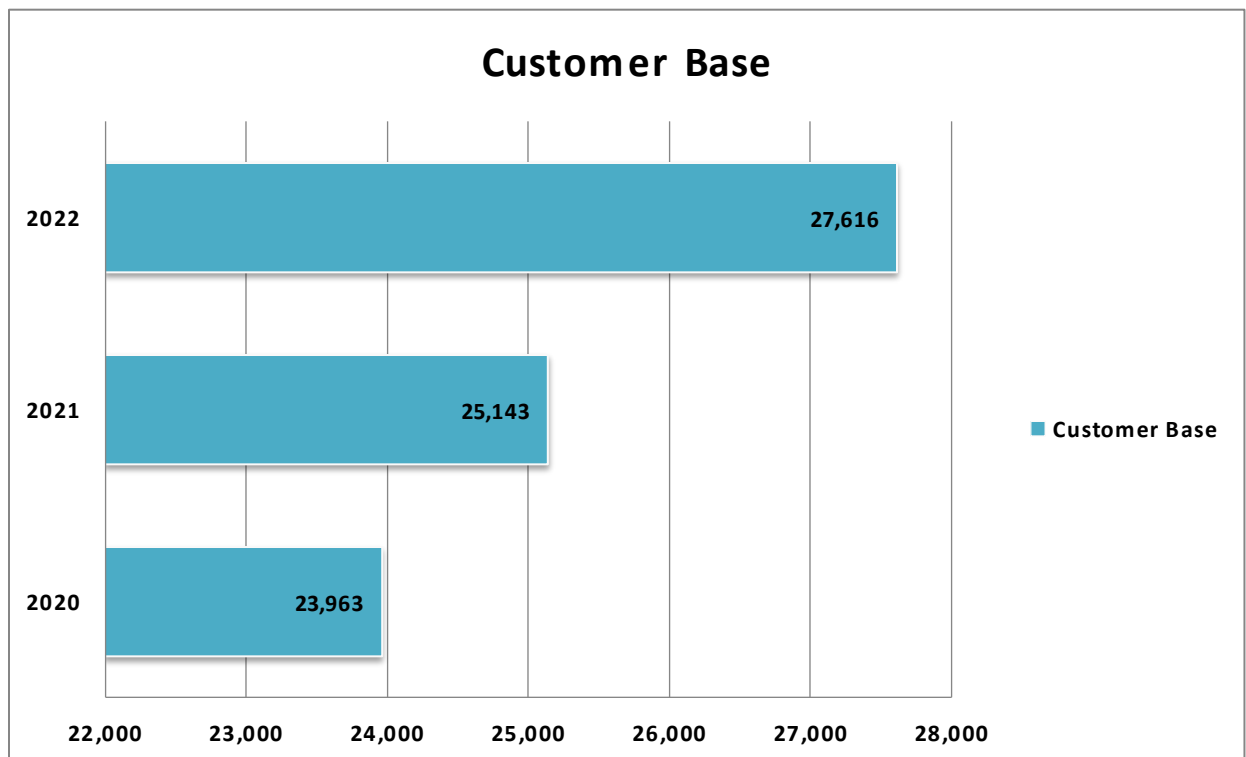


Figure 2 Customer Base

10 TECHNICAL OPERATIONS

This report highlights the situation analysis and outlines interventions within the period under review in the following focus areas;

- *Water Production,*
- *Non-Revenue Water,*
- *Hours of Supply,*
- *Plant Availability,*
- *Energy Consumption,*
- *New Water Connections,*
- *Water Quality monitoring and*
- *Preventive Maintenance*

10.1 Water Production

Eastern Water and Sanitation Company Limited (EWSC) abstracts water from both Surface and underground sources. The biggest water source for the utility company is Lutembwe Dam 2 with a 2,000,000 m³ reservoir capacity. Lutembwe Dam 1 is the second biggest with a reservoir approximately half the capacity of Dam 2. Both Dams are located in Chipata City.

In terms of water production at cooperate level, Chipata accounts for over 53%. Petauke accounts for over 14% and Lundazi approximately 10%. Mambwe is the smallest, contributing about 1 to 2%.

Currently, four (4) districts namely; Petauke, Nyimba, Chama and Mambwe are solely on groundwater supply. Katete and Lundazi entirely depend on Surface water while the rest of the districts have both Surface and groundwater sources.

Table 10 below shows the water source types for EWSC in respective districts

DISTRICT	SOURCE TYPE	NOTES
Chadiza	Surface and groundwater	Nsadzu dam in Chadiza and 1 borehole at Chanida boarder
Chama	Groundwater	4 Boreholes
Chipata	Surface and groundwater	Lutembwe Dam 1 and Dam 2, 2 boreholes at Mwami Boarder
Katete	Surface water	Katete Dam
Lundazi	Surface water	Lundazi Dam
Mambwe	Groundwater	3 boreholes
Nyimba	Groundwater	4 boreholes at Mfumbizi
Petauke	Groundwater	4 boreholes at FTC

Table 10 Water Source Type

10.1. Water Production against Targets

The amount of water produced in the year under review was **6,267,840m³**. The volume was above the set Target showing a positive variance of **792,457 m³**.

Table 2 below shows the Quarterly Production figures and the associated Targets for the year under review.

Table 11: Production Figures and associated targets

No .	District	1st Quarter		2nd Quarter		3rd Quarter		4th Quarter		Comparison			
		Production	Target	Production	Target	Production	Target	Production	Target	Total Achieved	Targets	Variance -m ³	Variance - %
1	Chipata	873,413	835,753	905,847	835,753	958,668	835,753	924,552	835,753	3,662,480	3,343,012	319,468	9.6
2	Katete	131,251	85,611	130,024	85,611	159,244	85,611	188,342	85,611	608,861	342,444	266,417	77.8
3	Petauke	187,750	190,512	197,970	190,512	197,700	190,512	215,810	190,512	799,230	762,048	37,182	4.9
4	Nyimba	55,311	59,270	59,012	59,270	68,307	59,270	74,741	59,270	257,371	237,080	20,291	8.6
5	Chadiza	85,602	71,442	81,360	71,442	86,698	71,442	89,689	71,442	343,349	285,768	57,581	20.1
6	Lundazi	139,940	105,840	146,340	105,840	156,670	105,840	149,210	105,840	592,160	423,360	168,800	39.9
7	Mambwe	18,798	17,463	20,215	17,463	21,819	17,463	25,778	17,463	86,610	69,852	16,758	24.0
8	Chama	49,370	60,152	48,780	60,152	49,680	60,152	41,040	60,152	188,870	240,608	-51,738	-21.5
Total		1,541,435	1,426,043	1,589,548	1,426,043	1,698,786	1,426,043	1,709,162	1,426,043	6,538,931	5,704,172	834,759	14.6

Figures 1 and 2 are the graphical presentations of the comparisons in the volumes of water produced by various districts. Chipata district produced 3,398,663m³ which accounted for 59% of the total water produced in the year under review. Petauke was the second with a total water production of 652,230m³ (12%) followed by Lundazi which recorded 468,080m³(8%).Nyimba is the only district that underperformed due to low plant availability.

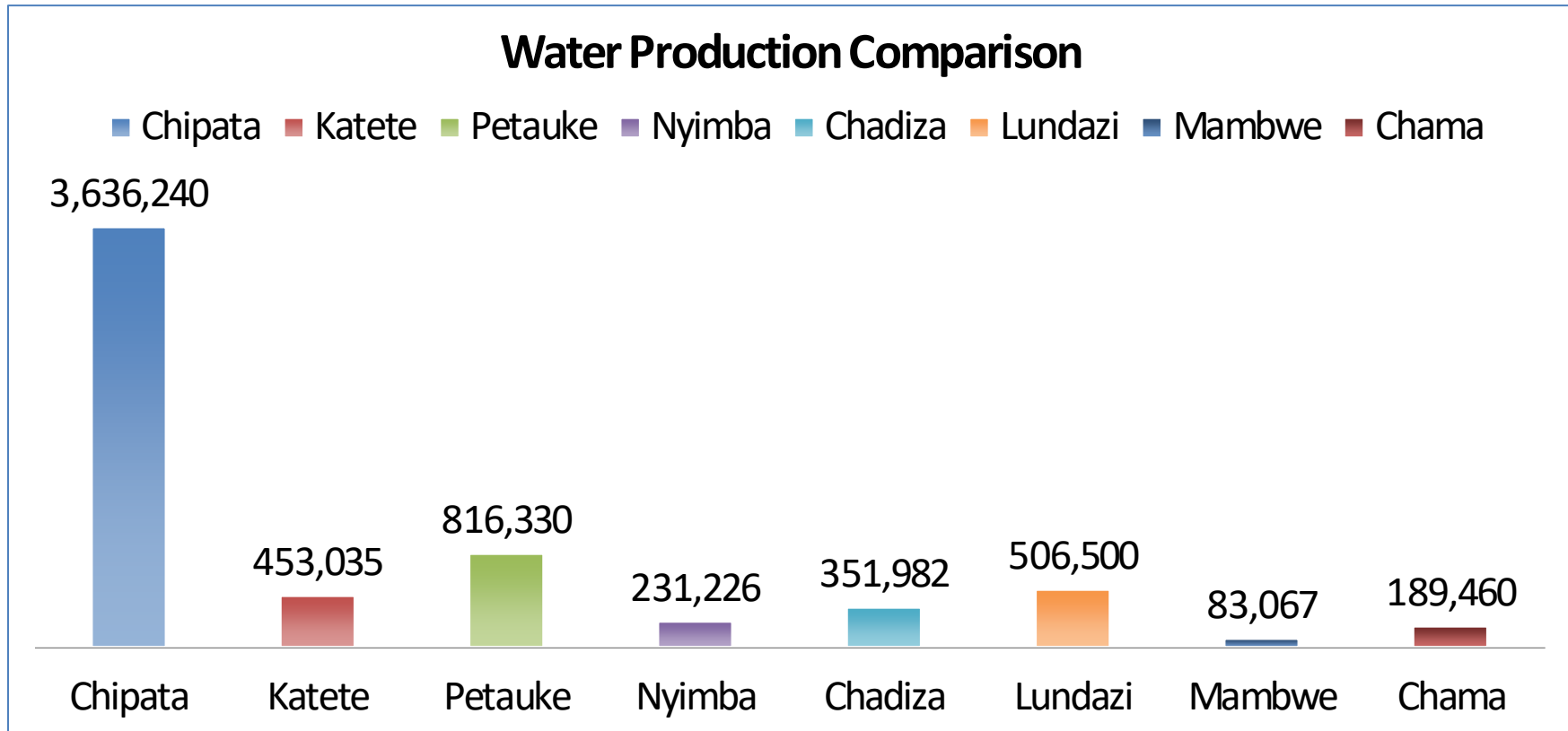


Figure 3: Water Production Comparison (%)

10.2. Non-Revenue Water For The Year 2022

Non-Revenue water (NRW) is the difference between the total system input volume and the billed Volume. The increase in NRW is as a result of leaking and broken pipes (physical losses), which are caused by poor operations and maintenance, the lack of active leakage control, and poor quality of underground assets. NRW also emanates from commercial losses caused by the under-registration of customer meters, data handling errors, illegal connections and theft. Table 12 below Shows the NRW for EWSC as the difference between the Production (Input Volume) and Billed Volume. Figure 4 shows the trends of NRW in the year under review

Table 12: NRW for 2022

Quarter		Chipata	Chadiza	Mambwe	Lundazi	Chama	Petauke	Katete	Nyimba	Total
1	Production	873,650	85,602	18,798	139,940	49,370	187,750	131,251	55,311	1,541,455
	Billed	448,677	50,423	14,834	108,765	34,715	89,915	77,549	41,657	866,535
	NRW	424,736	35,179	3,264	31,175	14,656	97,835	53,702	23,674	674,920
	%	49	41	21	22	30	52	41	25	43.78
2	Production	905,847	81,360	20,215	146,340	48,780	197,970	130,024	59,012	1,589,548
	Billed	406,736	47,336	13,389	70,243	33,941	87,279	73,281	42,340	794,545
	NRW	499,111	34,024	6,826	56,097	14,839	110,691	56,743	16,672	795,003
	%	55	42	24	38	30	56	44	28	50.01
3	Production	958,668	86,698	21,819	156,670	49,680	197,700	159,244	68,307	1,698,786
	Billed	472,686	52,209	16,817	115,053	39,230	92,965	82,138	50,519	920,617
	NRW	485,982	35,489	5,002	41,617	10,450	104,735	77,106	17,788	778,169
	%	51	41	23	27	21	53	48	26	45.81
4	Production	924,552	89,689	25,778	149,210	41,040	215,810	188,342	74,741	1,709,162
	Billed	477,511	66,412	20,105	111,001	35,083	118,141	103,253	58,617	990,123
	NRW	477,673	23,277	5,673	38,609	5,952	97,669	85,089	16,124	719,039
	%	48	26	22	26	15	45	45	22	42
TOTAL	Production	3,662,480	343,349	86,610	592,160	188,870	799,230	608,861	257,371	6,538,931.00
	Billed	1,805,610.00	215,380.00	65,145.00	425,062.00	142,969.00	388,300.00	336,221.00	193,133.00	3,571,820.00
	NRW	1,856,870.00	127,969.00	21,465.00	167,098.00	45,901.00	410,930.00	272,640.00	64,238.00	2,967,111.00
	%	50.70	37.27	24.78	28.22	24.30	51.42	44.78	24.96	45.38
2021 NRW	%	47	47	35	28	24	61	42	27	46

Table 13: Summary of Production Volume, Billed Volume and Non-Revenue Water– 2021 vs 2022

Period (Year)	Production	Billed (m³)	Non-Revenue Water (m³)	Non-Revenue Water (%)
2021	6,267,840	3,150,396	3,406,682	46
2022	6,538,931	3,571,820	2,967,111	45.38
			-105,953	

Comments;

The NRW at Corporate level was 45.38 in the year under review

The company recorded the highest NRW (50.01%) in the 2nd Quarter of the year. Through several devised interventions, the NRW was reduced to 45.81% (in 3rd Quarter) and later 42.07% in the last quarter (4th Quarter).

*The NRW reduced to 45.38% from 46% in the previous year. The institutional target of achieving less than 35% for the year under review was **NOT** met.*

Below are the overall factors that led to the high NRW in the year under review

- Old infrastructure which frequently give up especially due to rapid network system water pressure fluctuations.
- High Calcium Blockages in Petauke which remains a challenge and enormously causing a rise in NRW during unblocking.
- Losses through Fire Hydrants (FH)
- Lack of adequate materials to replace defective pipes and stuck Meters
- Lack of adequate Transport to ensure quick response to pipe bursts and leaks
- Under reading of old / malfunction and unclear water meters and - replacements are still ongoing,
- Unbilled customers, wrong readings, uncaptured customers for billing, unidentified illegal water connections /consumptions, etc.

Way forward

To curb this situation, the following interventions are ongoing;

- Intensifying tank water level inspection to avoid overflow from storage tanks – Telemetry to be procured for all the district in need
- Enhance the replacement process of all stretches with poor quality materials and periodic network inspections.
- Replacements of old pipe networks with serious leakages of identified stretches – on going.
- Procuring of a water meter testing kit to enhance verification of water meter efficiency and accuracy
- Embarking on area/district zoning of network which will help in quick identification of any invisible water loss in the system.
- Provide adequate and reliable transport for rapid response to attend to pipe bursts and leakages.
- Metering all Fire Hydrants.

10.3 Maintenance

The purpose of EWSC's water distribution system is to provide an adequate and reliable supply of safe water to the users. Operation and maintenance are those activities needed to continuously fulfill this purpose.

Network Maintenance involves activities that keep the system in good operating condition.

10.3.1 Preventive and breakdown Maintenance Activities

Table 14, shows the number of preventive maintenance works against the set targets for all the districts.

Table 14: Preventive Maintenance

2022						Comparison		
District	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	Targets	Variance (No.)	Compliance
Chipata	395	287	361	610	1653	350	1303	472
Chadiza	14	125	29	68	236	140	96	169
Chama	24	33	43	36	136	80	56	170
Katete	16	134	127	267	544	80	464	680
Nyimba	15	105	12	25	57	80	77	196
Mambwe	14	10	16	31	71	80	-9	89
Lundazi	18	27	14	51	110	80	50	138
Petauke	15	111	164	17	307	100	207	307
Total	511	832	766	1105	3214	990	2224	325

The preventive was above 100% showing how much EWSC is committed towards service provision with the use of old equipment.

10.4 Plant Availability

Plant availability is how available the machinery or equipments at the water treatment plant are fully operational. Breakdowns reduces the availability.

Table 15 shows the plant availability for Water Treatment plants in all the districts and Plant availability for the Sewage Pump Station in Chipata District respectively

Table 15: Plant Availability

Plant Availability (%)	Chipata			Chadiza		Mambwe	Lundazi	Chama	Petauke	Katete	Nyimba
	Dam1	Dam2	Mwami	Nsadzu	Chanida						
1st Quarter	80	80	100	100	50	80	100	75	100	100	100
2nd Quarter	80	80	100	100	50	80	100	75	100	100	100
3rd Quarter	80	80	100	100	50	100	100	93	100	100	100
4th Quarter	80	80	100	75	50	100	75	80	100	100	75
Average	80	80	100	94	50	90	94	81	100	100	94
Overall Corporate Average	87.5										
Overall Corporate Target	85										

Comment:

The Overall Plant Availability was 87.5% which was below the 85% Corporate set Target

10.5 Service Areas

10.5.1 Current Operational Areas

Figure 4 below shows the Serviced and Unserviced areas that are within Eastern Water and Sanitation Company Limited Catchment area.

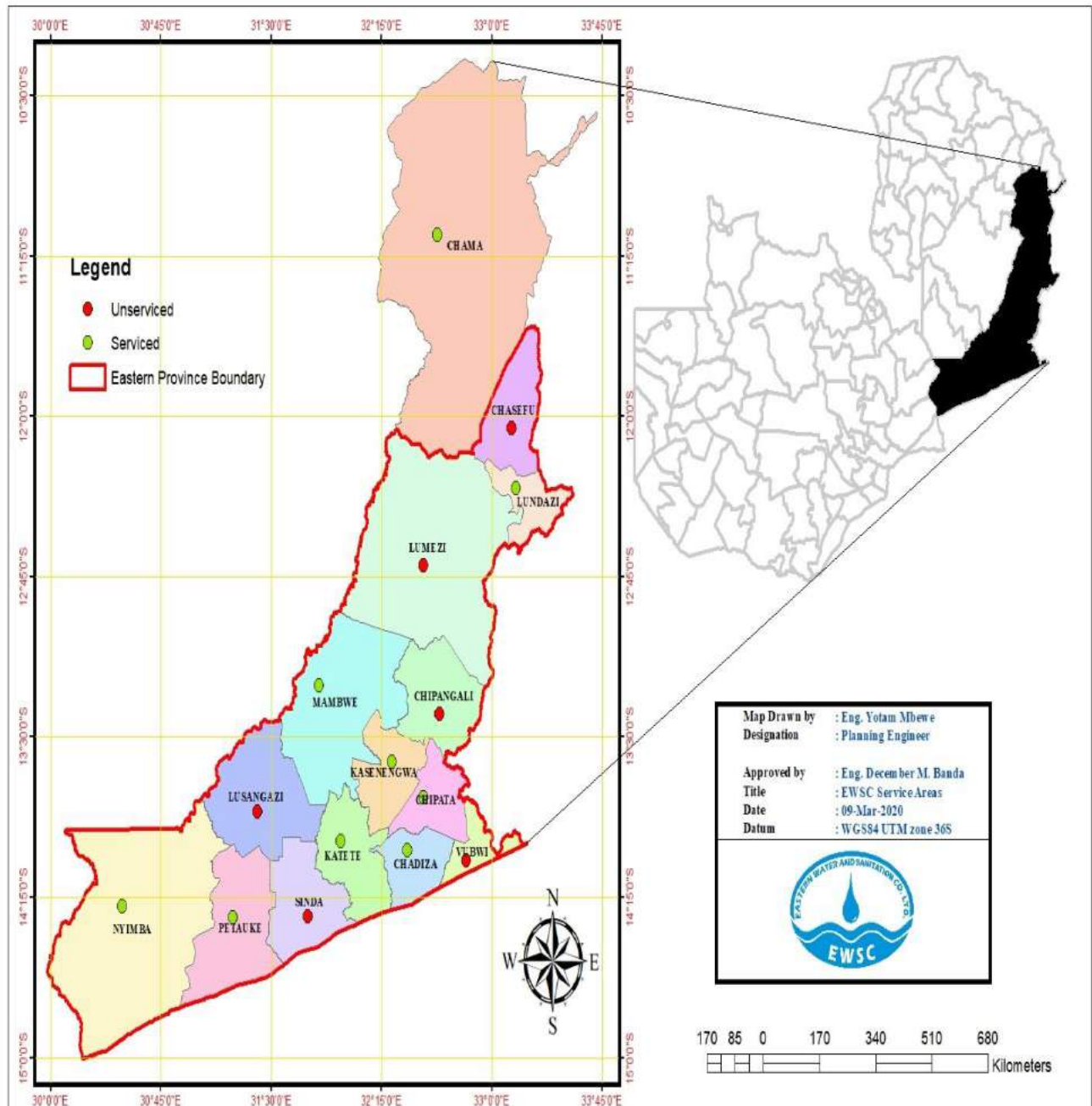


Figure 4 Service areas

10.6 Water Quality

Water Quality is a very important aspect in water abstraction, treatment and distribution. The quality of water is determined by its physical, chemical and microbiological characteristics. These properties collectively determine the overall water quality and the fitness of the water EWSC supplies to the customers.

Table (Water Quality Results)

Table 16: Consolidated summary of the Tests done and Compliance levels

Total Tests done in 2022 - All Networks	No. of tests required	No. of tests conducted	No. of tests in compliance with Zambian standards limits	No. of tests not in compliance with Zambian standards limits
2022				
Residue chlorine	1,623	3,690	3,617	73
Bacteriological	1,052	1,699	1,690	9
Colour	409	776	753	23
Turbidity	733	1,434	1,296	138
pH	458	2,512	2,512	0
Other Physio-chemical tests	482	850	850	0
Totals	4,757	10,961	10,718	243

The Overall Water Quality Compliance for the year under review was 99.7% in comparison with the NAWSCO Bench mark of not less than 95%.

10.7 Energy Consumption

Much of the energy used by conventional water treatment plants by EWSC is for pumping water into the plants, treatment and for high lifting it to the storage tanks.

Table 17: Energy Consumption for the year 2022 by District

2022					
District	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total (Kwh)
Chipata Dam1 & 2	734,767.00	775,925.00	788,563.00	806,468.00	3,105,723.00
Chadiza	75,403.94	62,027.59	102,000.00	85,704.00	325,135.53
Mambwe	5,054.00	8,763.17	10,006.48	15,591.90	39,415.55
Lundazi	52,258.00	58,448.00	89,878.55	68,045.00	268,629.55
Chama	34,991.00	41,272.00	43,265.00	38,821.00	158,349.00
Petauke	187,174.00	191,807.00	168,901.56	232,709.00	780,591.56
Katete	12,495.13	17,370.14	11,200.00	22,202.60	63,267.87
Nyimba	51,070.00	56,395.00	67,388.00	51,555.00	226,408.00
Sewerage Chipata	10,036.60	10,739.90	15,140.00	5,284.00	41,200.50
Mwami	7,023.80	7,999.90	23,510.00	8,423.00	46,956.70
Chiparamba	1,073.60	536.80	2,514.00	1,300.00	5,424.40
TOTAL					5,061,101.66

Comment:

There was an increase in the energy consumption from (**4,859,041.12 to 5,061,101.66**) Kwh. This represents 8.8% increase in comparison with the previous year.

This increase was as a result of the increase in the Production as indicated above.

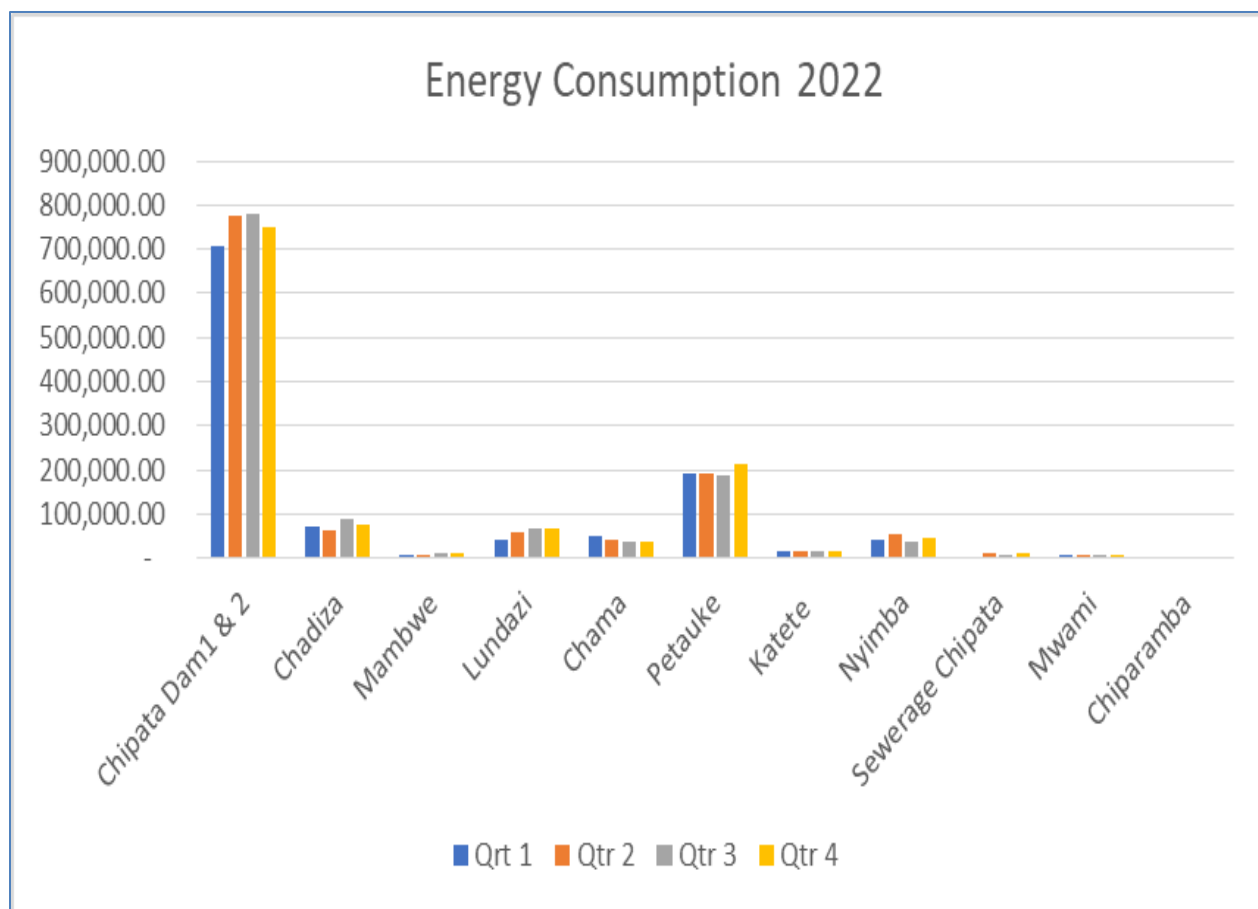


Figure 5 Energy Consumption

10.8 Safety, Health And Environmental Matters

Generally, safety was observed in all work places in the quarter under review,

- The only incident recorded was an environmental issue which involved the discharge of raw sewage into the environment. The matter was rectified immediately
- No accident was reported.
- Personal Protective Equipment (PPE) was distributed to all eligible workers.
- Safety and Health Policy was implemented in all the districts.

10.9 2022 Projects Report

S/No.	Description of the project	Funding agency & contractor	Start Date	End Date	Estimated Cost	Objective	Activity output	Activity Outcome/Beneficiary Population	Percent Progress
Internally Funded									
1.0	Sewage By-Pass Channel and Pump Installation	EWSC	January 2020	May 2020	91,000,00 ZMW	To provide for Continuous Sewage Pumping in events of pump breakdown and/or maintenance works in the main pump house.	Construction of a new sewage channel. Construction of a Pump Chamber. Installation of a 50m ³ /hr pump	To ensure uninterrupted sewage conveyance to the Stabilization ponds.	Works have stalled awaiting rescoping of the remaining works so as to allocate resources for the completion of the project.
2.0	Mwami Office Block	EWSC	Sept 2020	Nov 2020	K681,600.00	To Establish an EWSC office in Mwami	Building an Office Block	Increased access to service delivery in Mwami	Overall -30% Works to be on the office building.
3.0	GIS – Chipata Water and Sanitation Distribution System	EWSC	March 2020	Sept 2020	-K30,000	To Manage EWSC Water and Sanitation distribution system and customer information	Creation of a Geodata base of Chipata's Water and Sanitation 0%	GIS – Chipata Water and Sanitation Distribution System	EWSC

4.0	Nabvutika springs	EWSC	2020	2022 Dec	TBA	To construct an all-weather Water Treatment Plant for the natural Spring	Compact modular water treatment plant and office.	The following are the beneficiary areas Nabvutika, Mthilasembe, Sido, O Section Katopola, Walela	30% progress done so far.
Externally Funded									
1.0	Chipata UWSSP Phase IV	KfW	<i>June 2021</i>	2024	10,000,000 EURO	To improve water availability by reducing NRW in Chipata City	Rehabilitation, Creation of DMAs and Extension of the Water distribution Networks	Increased access to safe drinking water for the Population of Chipata	0% The Consultant is on the ground collecting data for a detailed design.
2.0	GIZ Support on Pre-paid water meter , Portable water testing Kit, & Lockable Valve	GIZ Funds	<i>2021 Sept</i>	2022 March	30,000:00 EURO	To support the CU on Pre-paid water meter – 150, One portable water testing Kit, 1500 Lockable Valve.	To improve collection efficiency and meter accuracy	Benefit the CU on the Debt Management.	80% Completed for procurement by GIZ
3.0	Rehabilitation of Katete Dam	Kfw	<i>2021</i>	2022	TBA	To rehabilitate the leaking Katete Dam	Ensure the is Leak repaired	The whole Katete district community as beneficiaries	0 % on implementation. The project is in the final stage of engaging the contractor.
4.0	SAVENDA Prepaid metering	GRZ	<i>2021</i>	2022	TBA	To support the CU on Pre-paid water meter – 50	To improve collection efficiency	Benefit the Cu on the Debt Management.	50% Completed for procurement by GRZ

5.0	Chipata and Petauke Sanitation project	GRZ/ADB	2021	2023	TBA	To improve Sanitation Services in Chipata and Petauke	Come up with the most possible sanitation option to be implemented	Beneficiaries are Chipata and Petauke Communities	0% on implementation but the team is on the ground collecting data currently.
6.0	Sinda Urban Project	GRZ	2021 May	2022 Dec	16,000,000:00 ZMW	To improve water availability and sanitation services	Construct water source, raising Main, storage tank, water distribution networks and Kiosks.	Increased access to safe drinking water for the Population of Sinda,	0%
7.0	Kacholola Rural Water Supply and Sanitation (NYIMBA)	GRZ	2021 May	2021 Dec	7,000,000:00 ZMW	To improve water availability and sanitation services	Construct water source, raising Main, storage tank, water distribution networks and a Kiosk.	Increased access to safe drinking water for the Population of Kacholola,	70%
8.0	Chama Water Supply and Sanitation Support	GRZ	2021 Dec	2022 June	1,200,000:00 ZMW	To Supply Safe adequate and portable water to Chama residents	Construction of two Boreholes, and the rehabilitation of the old steel tank	To improve the access to water supply in the area.	70%

12.0	Lumezi Water Supply and Sanitation Project	GRZ	TBA	TBA	TBA (but a BH was drilled)	To Supply Safe adequate and portable water to Lumezi residents	Construction of two Boreholes, storage tank, raising main and reticulation system and a kiosk	To improve the access to water supply in the area.	10% Work done One BH drilled and handed over to EWSC by DWRD. Need for resource mobilization
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10.10 Conclusion and Recommendations

From the information presented in the year under review, it is worth noting that the company has performed well in some areas while other areas require great improvements. The water production volume set target was met with a positive variance of **834,759m³**

The NRW remained a challenge as it only slightly reduced from 46% the previous year 45.38% this year.

The Company still has great potential to perform better in the next quarter.

To this effect, the following Recommendations were made;

- Intensification of the Non-Revenue water and the Energy Reduction strategies.
- Engage ZESCO to ensure that power cuts to our treatment plants are minimized considerably.
- Speed up the process of implementing alternative energy source

11 HUMAN RESOURCE AND ADMINISTRATION

The Human Resources and Administration report outlines the critical items that were conducted in the year under review of 2022

11.1 Establishment

The number of employees as at 31st December, 2022 was 164 against the approved establishment of 189. Out of 164 employees, 128 were male and 26 female on permanent and pensionable whilst 10 were contractual staff, 6 males and 4 females

11.2 Details of Employee Engagements, Promotions and Separations

The company recruited ten (10) employees during the year under review as indicated below:

NO	NAME	DEPARTMENT	POSITION	WORK STATION	DATE
1	Mr Emmanuel Mulenga	Commercial	Revenue Officer	Head office	04/04/2022
2	Mr Enock M Phiri	Internal Audit	Internal Auditor	Head Office	09/05/2022
3	Mr Davison Sakala	Procurement	Asst. Procurement Officer	Head Office	09/05/2022
4	Mr Songolo Mambwe	Technical	Plant Operator	Chadiza	01/06/2022
5	Mr Robson Kasonde	Technical	Plant Operator	Chipata	01/06/2022
6	Mr Bisa Zulu	Technical	Plant Operator	Chama	01/06/2022
7	Ms Charity Muleya	Technical	Plant Operator	Mwami	01/06/2022
9	Mr Dickson Mwanza	Technical	Pumber	Chipata	01/09/2022
9	Mr Ignituous Phiri	Commercial	Customer Service Assistant	Nyimba	12/09/2022
10	Mr Ason Banda	Commercial	Customer Service Assistant	Katete	01/09/2022

Table 18 Employees Recruited

The Company bid farewell to the five (5) employees as indicated below:

NO	NAME	DEPARTMENT	POSITION	MODE OF SEPARATION	WORK STATION	DATE
1	Mr Stephen Banda	Technical	Plant Operator	Dismissal	Chadiza	19/01/2022
2	Ms Jacqueline J Mudenda	Commercial	Customer Service Assistant	Dismissal	Chipata	01/01/2022
3	Mr Robert Phiri	Administration	Driver	Retirement	Chipata	15/05/20022
4	Mr Mukela Simbuwa	Commercial	Commercial Manager	Expiry of Contract	Head Office	03/06/2022
5	Mr George Sakala	Technical	Plant Operator	Retirement	Nyimba	31/12/2022

Table 19 Employees Separations

The Company promoted and seconded employees as below:-

NO	NAME	DEPARTMENT	POSITION	NEW POSITION	WORK STATION	DATE
1	Mr Chalton Mayoba	Technical	Senior Plumber	Deputy General Secretary	Union (Lusaka)	09/10/2022
2	Mr Silas Luhanga	Finance	Management Accountant	Commercial Manager	Head Office	01/12/2022
3	Mr Marbin Ching'ambi	Technical	Plant Operator	Station Supervisor	chanida	01/12/2022

Table 20 Employee Promotions

11.3 Leadership and Employee Management

The Company continued to experience good industrial harmony and good employee-employer relationship during the period under review despite the delay in payment of salaries. There was no industrial unrest or work stoppage recorded.

11.4 Industrial Relations/Legal Issues/Staff Discipline

a) Legal Issues

- The collective bargaining (negotiations) process between management and employee's representatives (Union) on the Conditions of Service for the year 2022 and harmonisation and rationalisation of salaries and conditions of service was held and concluded. Rationalisation and Harmonisation of selected and agreed items was implemented for both unionised staff and management in the period under review.
- The legal case of the former Managing Director, Mr Lytone Kanowa for wrongful termination of employment was not yet disposed of in the Industrial Relations Courts. The company has been represented by (JB Sakala and Company).

- The case for the demand of payment for Dam II land (farm No. D21/A) belonging to Mr Eugene Richard Devine was in court and was to be heard 30th November, 2022 but it was adjourned 22nd June, 2023. Their claims are as below:
 - (i) The dam was built without prior consent from the owner (Mr Devine)
 - (ii) The Devines are demanding for payment for the land of 138 hectares where the dam was constructed because there was no payment that was made in respect of the same hence the rentals should be paid for the use of the land
 - (iii) Damages for the destruction were not dealt with and there was no compensation that was ever paid.
 - (iv) The total amount being claimed is K3, 630,000.00.
- The case of refund for sale of subdivision of Farm No. 3553 Magwero Road Chipata bought from Black Buffalo Farms by EWSC was being handled by the Lawyer J B Sakala and Company.

Note that there were no new matters of litigation recorded during the period under review apart from the pending ones that have not yet been concluded

b) Staff Disciplinary issues

- A case of neglect of work standards was recorded and heard involving a staff in Lundazi (Mr Sammy Musawa), Plant Supervisor. He was given a verdict of Recorded Warning and Five (5) days suspension without pay. The verdict was in line with the Company Disciplinary Code of Conduct and Procedures.
- A case of *summary dismissal* for Ms. Jacqueline Jombosis Mudenda on grounds of desertion was recorded
- A case of *summary dismissal* for Mr. Steven Banda on grounds of dishonest conduct (fraud as evidenced) was recorded.

11.5 Terminal Benefits And Gratuities

The staff that separated from the Company through retirement, expiry of contract and dismissal were not yet all paid their benefits due to liquid situation. Some retirees have been maintained on payroll according to the constitution article number 189. In this regard, the Company developed a payment plan to pay the affected staff in phases.

11.6 Training and Development/Capacity Building

As per our training plan, a number of trainings did not take place because of strained resources. However, most training that took off was mainly sponsored by the ministry, NWASCO or respective professional bodies. The following were the trainings (both in-house and external) that took place in the period under review:-

- Skills Development Levy TEVET trainings for identified staff conducted by Chipata Trades took place covering representative in staff in different fields from all the districts and Head Office

- Induction on Job Evaluation organized by Remuneration Division (Cabinet) attended by two senior managers (HRAM and FM) and labor movement representative
- Training of trainers on Lukanga Meter Reading Application was conducted.
- ZPPA electronic Government Procurement (e-GP) system training for selected middle management staff and staff in procurement and stores was conducted and it was facilitated by ZPPA.
- Sage 200 operations and management was rolled out to staff in all the districts virtually.
- Pre- Paid Meter Reading Training for identified staff in technical, commercial and ICT were conducted both virtually and physically.
- Roll out of digital meter reading application (Lukanga Water App) was conducted in house
- Customer Care Management training for all relevant staff in all districts was done
- Training of two (2) Plant Operators on installation of Solar Energy Application was done, coordinated and sponsored by GIZ
- In – House Solar Energy Application induction of two staff was conducted
- Training of two management staff (Technical Manager and District Manager- Chipata) on Urban Onsite Sanitation (OSS) and Fecal Sludge Management (FSM) organized by NWASCO
- Induction of Management Staff at Head Office on the formation and functions of the Integrity Committee conducted by the Anti-Corruption Commission team
- First Aid and Fire Safety training of key identified staff was conducted

11.7 Performance Management System

The organization continued to implement an objective staff performance assessment system to monitor measure and reward staff performance during the period under review, clearly outlining **KPIs** for all staff. All staff had signed performance contracts aligned with the organization's strategic objectives.

11.8 HIV/AIDS

The organization had an annual HIV / AIDS plan, highlighting planned related activities. The organization participated in community activities aimed at fighting this scourge. The organization also continued with the distribution of condoms through its strategic points such as pay points and kiosks. However, due to limited resources, a number of planned HIV / AIDS annual activities did not take place.

11.9 Health and Safety

(i) Terminal Benefits and Gratuity

The organization continued to struggle with clearing terminal benefits and gratuity for retired staff and those whose contracts had come to an end. This is because of the liquidity challenge the institution has continued to face. As such, by the close of the year, three (3) who had retired during the period under review had still remained on payroll as per legal requirement.

However, management devised a payment plan of clearing this backlog in phases.

(ii) Medical Scheme / Health

The organization closed the private medical scheme that it initially had and all staff accessed medical care through **NHIMA** mandatory medical scheme. The organization did not experience very serious hiccups with the scheme despite being behind with statutory contributions.

(iii) Occupational Health and Safety

The company managed to provide PPE to all entitled staff and no workplace accidents were recorded during the period under review

- No accident was reported
- Safety and Health Policy was implemented in all the districts

11.10 Social Sports

The organisation values the health of its employees. During the year under review, there were no sporting activities. The Company started the planning on the improvement of sports.

11.11 Real Estate

- i. **Title acquisition:** The Company has begun the process of title acquisition and property surveying and has since engaged private land surveyors. obtain Consent letters for the properties from Chief Nyalungwe in Kacholola, Chief Ndake in Nyimba, Chief Kalindawalo in Petauke, Chief Mlolo in Chadiza and Chief Mpezeni in Chipata
- ii. **Office renovations:** the financial challenges that the institution faced during the Land Acquisition: Engagements with traditional leaders over land acquisition was an on-going process in the quarter under review. The company managed to period under review could not allow the institution to execute all the planned works to uplift the EWSC offices. We however managed to do the following:
 - a. Renovation of the Boardroom at HQ
 - b. Renovation of the company house in Moth

11.12 Fleet Management

Management procured one (1) new motor vehicle through Sinda Project and four (4) motor bikes in the year under review. However, the maintenance and repairs of old vehicles costs have continued to increase because almost of the vehicles / motor bikes have out-lived the recommended usage lifespan.

12 CONCLUSION

The company being recognized as the best performing utility company despite the many challenges experienced in the year under review is a clear indication of the commitment we have to ensure that we deliver exemplary water and sanitation services to the people of Eastern Province. We shall endeavour to improve in the areas where we did not perform well.



2022