Shorthorn Printers Ltd.

Republic of Zambia

REPORT OF THE

AUDITOR GENERAL

ON THE

ACCOUNTS OF WATER SUPPLY AND SANITATION COMPANIES

FOR THE

FINANCIAL YEAR ENDED

31st DECEMBER 2020

REPUBLIC OF ZAMBIA

REPORT OF THE

AUDITOR GENERAL

ON THE

ACCOUNTS OF WATER SUPPLY AND SANITATION COMPANIES

FOR THE

FINANCIAL YEAR ENDED

31st DECEMBER 2020

OFFICE OF THE AUDITOR GENERAL

VISION: A dynamic audit institution that promotes transparency, accountability and prudent management of public resources.

MISSION: To independently and objectively provide quality auditing services in order to assure our stakeholders that public resources are being used for national development and wellbeing of citizens.

CORE VALUES:
Integrity
Professionalism
Objectivity
Teamwork
Confidentiality
Excellence
Innovation
Respect

PREFACE

The Water Supply and Sanitation Companies are key players in the attainment of Sustainable Development Goal (SDG) No. 6 Clean Water and Sanitation.

Safe drinking water, sanitation and good hygiene are fundamental to the health and economic development of a nation. However, access to clean water and sanitation is still a challenge in Zambia.

In order to provide assurance on government aspirations of ensuring provision of safe water, sanitation and hygiene as contained in the 7th National Development Plan, I carried out, the audit of National Water and Sanitation Council (NWASCO), Water Resources Management Authority (WARMA) and eleven (11) Water and Sanitation Companies which are responsible for the provision of water and sanitation services in the country.

This report highlights matters concerning the management and financial performance of NWASCO, WARMA and Water Supply and Sanitation Companies. These matters include failure to prepare and have accounts audited, implement approved governance structures, implement National Policies and Board approved plans, failure in internal control systems and failure to meet key performance indicators as provided by NWASCO, the sector regulator.

I am hopeful that, by highlighting areas of weaknesses such as internal controls, leadership, financial management and governance in the Water and Sanitation Companies audited, those charged with governance will address the weaknesses in order to improve the performance of the companies.

Dr. Dick Chellah Sichembe

AUDITOR GENERAL

Table of Contents

Executive Summary

This Report has been produced in accordance with Article 250 of the Constitution of Zambia (Amendment) Act No.2 of 2016, Public Finance Act No.15 of 2004, Public Finance Management Act No.1 of 2018 and Public Audit Act No.13 of 1994.

During the audit process, there were various levels at which the Office interacted and communicated with those charged with governance of the companies mentioned in this report. The purpose of this interaction was to provide an opportunity for the responsible officers to clarify and take corrective action on the findings of the audits.

This Report contains paragraphs on National Water Supply and Sanitation Council (NWASCO), Water Resources Management Authority (WARMA) and eleven (11) Water Supply and Sanitation Companies that were audited and remained with unresolved issues as at 31st October 2021. Some of the issues raised in this Report include:

i. Weaknesses in Corporate Governance

- **Failure to Hold Annual General Meetings**

  Contrary to Section 57 (1) of the Companies Act No.10 of 2017 which requires a company to hold an Annual General Meeting (AGM) within ninety (90) days after the end of each financial year of the company, two (2) Water Supply and Sanitation companies namely; Kafubu and Chambeshi did hold Annual General Meetings during the period under review.

- **Lack of Board of Directors**

  During the period under review, Lukanga Water Supply and Sanitation Company operated without a full Board of Directors.

ii. Lack of Audited Financial Statements

During period under review four (4) Water Supply and Sanitation Companies namely, Lukanga, Chambeshi, Western and Kafubu did not have audited financial statements.

iii. Weaknesses in the Implementation of Information and Communication Technology (ICT) Systems

The following observations were made.

- **Lack of Segregation of Duties - Chambeshi Water Supply and Sanitation Company**

  Three (3) IT officers who had system administrator rights to the applications also had full rights and privileges to carryout business processes such as ability to add, delete, view or modify accounting or customer data thereby compromising internal controls.

- **Lack of IT Steering Committees**

  During the period under review, two (2) Water Supply and Sanitation Companies namely Lukanga and North-western did not have IT Steering Committees contrary to CoBIT2019 PO4.3.

- **Lack of Offsite Back up**

  During the period under review, two (2) Water Supply and Sanitation Companies namely; Kafubu and North-western did have ICT offsite back up facilities contrary to CoBIT DSS4.9.

iv. Average Performance - Outlook of Commercial Utilities in 2020

During the period under review, most of the Commercial Utility Companies did not meet the minimum acceptable bench marks set by NWASCO resulting in poor service delivery and low revenue collection. In particular, most of the Utility Companies did not meet the required performance indicators in the following areas;

- Water Quality – most of the Water Utility Companies achieved less than the required 95% Water Quality Confidence Level.
- Non-Revenue Water – 52.8% against minimum acceptable benchmark of 25%.
- Sanitation Coverage - 68.9% against minimum acceptable benchmark of 80%.
- Metering Ratio – 82 % against minimum acceptable benchmark of 100%.

v. Weaknesses in the Billing Systems

Commercial Policies of water utility companies require all information related to customer transactions to be maintained on a customer database with online access. However, a review of billing systems revealed the following weaknesses.

- Customers with duplicate account numbers
- Lack of Requisite Customer details

- Unbilled metered customers
- Unauthorised cancellation and adjustments of Bills

vi. **Failure to Meter Abstraction Points – WARMA**

Water abstraction is the process of taking or abstracting water from a natural source (River, lakes, groundwater acquirers etc.) for various uses, from drinking to irrigation, treatment and industrial applications. A review of the summary report on Lunsemfwa sub catchment rapid water and water permits revealed that out of a total of 206 water permits holders in the sub catchment, 45 did not have metred abstraction points.

vii. **Non-functional Hydrometric Stations Under WARMA**

WARMA operates sixty five (65) telemetric stations countrywide. The stations were constructed to transmit data electronically to a central station in Lusaka for analysis. The information transmitted include river water level, water temperature and rainfall data.

However, nine (9) out of the sixty five (65) hydrometric stations were non-functional and not transmitting electronic data.

viii. **Weaknesses in Infrastructure Management**

- **Delayed completion of Water Supply System Projects**
  - Construction of water supply system in Kafulafuta at contract sum of US$449,090,628) delayed for a period of 27 months;
  - Construction of Water Supply System in Mpulungu at contract sum of K167, 252,052 delayed for a period of 33 months;
  - Construction and Rehabilitation of Water Supply Systems in Nakonde at a contract sum of K33,900,343 delayed for a period of 22 months.
- **Poor Maintenance of Water Supply Infrastructure**

  The water supply infrastructure was poorly maintained at Lukanga and Mulonga Water Supply and Sanitation Companies

- **Delayed Payment to Contractors**

  A review of six (6) projects which commenced in 2018 in Muchinga and Northern Provinces, revealed that out of the total certified works valued at K467,402,554 amounts totalling K369,686,383 had been paid leaving a balance of K97,716,171.

  As at 31st October 2021, the outstanding amount had not been cleared.

Other irregularities raised in this Report are as shown in table below.

Table: Summary of Other Irregularities

No.	Details	Amount K
1	Failure to Settle/Remit Statutory Obligations	196,933,170
2	Unsupported Payments	10,437,593
3	Unaccounted for Stores	6,511,142
4	Wasteful Expenditure	3,337,618
5	Failure to Collect Funds	12,587,801
6	Questionable Payments	118,472
7	Failure to Follow Procurement Procedures	156,964
8	Unaccounted for Revenue/Funds	3,612,461
9	Non Revenue Water	2,015,407,741
	Total	**2,249,102,962**

In order to address the weaknesses identified in this report and attain SDG No. 6 Clean Water and Sanitation, I recommend that the Boards of Directors are put in place at all times, water utilities are recapitalised, operational benchmarks set by NWASCO are achieved and internal weaknesses are addressed.

PART I

PREAMBLE

1. Introduction

The roles and responsibilities of the Auditor General regarding the management of public resources, reporting and accountability are contained in the Constitution of Zambia (Amendment) Act No. 2 of 2016, the Public Finance Act No. 15 of 2004, Public Finance Management Act No. 1 of 2018 and the Public Audit Act No. 13 of 1994.

This Report on the Accounts of Water Supply and Sanitation Companies covering the financial year ended 31st December 2020 contains NWASCO, WARMA and paragraphs on eleven (11) Water Supply and Sanitation Companies that were audited but the issues remained unresolved as at the date of reporting.

The Report also includes findings from the audit of ICT systems that some water utility companies had implemented to improve on the efficiency and effectiveness of service delivery.

2. Scope and Methodology

This Report is as a result of the audit of NWASCO, WARMA and eleven (11) Water Supply and Sanitation Companies for the financial year ended 31st December 2020. Although the Report is for the financial year ended 31st December 2020, it includes financial years 2018, 2019 and 2020 for companies that had not been audited for those years.

During my audits, I also relied on the NWASCO sector reports. NWASCO as a regulator of the sector set comparative performance benchmarks and averages to measure performance of the Water and Sanitation Companies. The parameters include Non-Revenue Water (NRW), Water Quality, Metering Ratio, Water Service Coverage, Hours of Water Supply, Staff Cost in relation to Billing and Collection, Collection Efficiency and Operational and Maintenance Coverage.

In preparing the Report, the Controlling Officer in the Ministry responsible for the sector and Chief Executive Officers/ Managing Directors of the affected Water and Sanitation Companies were availed draft audit report paragraphs (DARPs) for comments and confirmations of the correctness of the facts presented. Where comments were received and varied materially with the facts presented, the paragraphs were amended accordingly.

3. Internal Controls

In this Report, specific mention is made of weaknesses in corporate governance, failure to follow financial regulations and implementation of ICT systems. These are clear indicators of internal control weaknesses in most water supply and sanitation companies.

PART II

PARAGRAPHS

4. The National Water Supply and Sanitation Council

4.1 Background

a. Establishment

The National Water Supply and Sanitation Council (NWASCO) was established by the Water Supply and Sanitation Act No. 28 of 1997 of the Laws of Zambia as amended by the Water Supply and Sanitation (Amendment) Act No. 10 of 2005. The mandate of the Council is to regulate the provision of water supply and sanitation services in the country.

b. Governance

NWASCO is governed by a Board comprising seven (7) members who are appointed by the Minister responsible for Water Development, Sanitation and Environmental Protection on three (3) year renewable contracts as follows:

i. a representative of the Consumer Protective Association of Zambia;
ii. a representative of the Zambia Chamber of Commerce and Industry;
iii. a representative of an association whose membership consists of water sector professionals;
iv. a representative of a private sector institution concerned with public health;
v. a representative of the Ministry responsible for water resources;
vi. a representative of the Ministry responsible for Local Government and Rural Development (formerly Local Government and Housing); and
vii. a representative of the Attorney-General.

The Chairperson and Vice are elected by the Council from amongst its members.

c. Management

The day-to-day operations of NWASCO is the responsibility of the Director who is the Chief Executive Officer and is assisted by the Chief Inspector, Secretary to the Council and the Finance and Administration Manager.

d. Sources of Funds

According to Section 3, Part II, Paragraph 9 of the First Schedule of the Act, the funds of NWASCO shall consist of such moneys as may:

i. be appropriated by Parliament for the purposes of the Council;
ii. be paid to the Council by way of fees, grants or donations; and
iii. otherwise vest in or accrue to the Council.

The Council may also:

i. accept moneys by way of grants or donations from any source in Zambia and, subject to the approval of the Minister, from any source outside Zambia;
ii. with approval of the Minister, raise by way of loans or otherwise, such monies as it may require for the discharge of its functions; or
iii. charge and collect fees in respect of consultancy and other services provided by the Council; and
iv. charge and collect fees in respect of programmes and seminars conducted by the Council.

e. Information and Communication Technology Systems

During the period under review, NWASCO operated the following key Information and Communication Technology (ICT) systems:

i. NWASCO Management Information System – General system;
ii. PASTEL used for Accounting transactions;
iii. MICROPAY used for Human Resource and Payroll; and
iv. CITIDIRECT used for Online Banking transactions.

4.2 Audit Findings

An examination of accounting and other records maintained at NWASCO for the financial year ended 31st December 2020 revealed the following:

a. Budget and Income

During the period under review, the Council budgeted to raise income totalling K87,546,563 from co-operating partners, rental income, licensing and government grants against which amounts totalling K76,783,215 were received and generated resulting in a negative variance of K10,763,348. See table 1 below.

Table 1: Budget and Income

No.	Source of Funds	2020 K	2019 K	2018 K	Total K
1	License Fees	22,701,323	21,304,092	19,461,766	63,467,181
2	GRZ Grant	3,000,000	1,413,031	416,500	4,829,531
3	Rental Income	336,600	51,750	-	388,350
4	Co- operating Partners	3,829,559	2,830,236	1,438,358	8,098,153
6	**Actual Income**	**29,867,482**	**25,599,109**	**21,316,624**	**76,783,215**
7	**Budget**	**31,211,469**	**29,725,489**	**26,609,606**	**87,546,563**
8	**Variance**	**(1,343,986)**	**(4,126,380)**	**(5,292,981)**	**(10,763,348)**

b. Operational Matters

i. Failure to Achieve Set Targets

In 2015, the Council developed a strategic plan to cover the period from 2016 to 2020 which outlined the strategic objectives and performance indicators of the Council. However, it was observed that the Council failed to achieve three (3) key performance/ output indicators in the Strategic Plan as at 31st December 2020. See table 2 below.

Table 2: Outcomes not Achieved - Strategic Objective 3

Priority Actions	Performance/Output Indicators	Status as at 31st December 2020
a. Increase access to Water Supply and Sanitation services.	To increase the number of household water connections by 120,000 by December 2019.	As at 31st December 2020 out of the target of 120,000 connections, 104,886 water connections had been installed.
	To increase the number of sewerage connections by 80,000 by December 2019.	As at 31st December 2020, only 34,063 sewerage connections had been installed.
b. Ensure increased hours of supply.	Average hours of supply increased to 22hrs by December 2019.	As at 31st December 2020 the average hours of water supply were at 18 hours.

ii. Failure to Collect License Fees from Water Utility Companies

Section 6.1 of NWASCO Financial Regulations Manual, requires that all Water Supply and Sanitation service providers should be licensed by NWASCO. On issuing a license, providers pay a one-off license application fee prescribed by Parliament and a monthly fee after being issued a license.

In this regard, during the period under review, amounts totalling K71,263,180 in respect of license application and monthly fees were expected to be collected from eleven (11) water utility companies out of which amounts totalling K61,702,725 were collected leaving a balance of K9,560,455 as at 31st December 2020. See table 3 below.

Table 3: Uncollected License Fees

No.	Commercial Utility	2020 K
1	North Western WSS	314,548
2	Western WSS	200,315
3	Southern WSS	1,165,453
4	Chambeshi WSS	320,535
5	Eastern WSS	402,555
6	Kafubu WSS	1,067,659
7	Lusaka WSS	1,278,421
8	Luapula WSS	91,116
9	Nkana WSS	527,260
10	Mulonga WSS	3,524,005
11	Lukanga WSS	668,588
	Total	**9,560,455**

iii. Sector Performance

An analysis of the performance of individual water utility companies revealed that most companies did not meet the set Key Performance Indicators for the two-year period. In particular, North Western and Western Water Supply and Sanitation Companies had the worst performance and were consequently placed on Special Regulatory Supervision (SRS) to compel them to improve their performance. However, as at 31st October 2021, NWASCO had not conducted the inspection to confirm that the two (2) water utility companies were compliant. See table 4 below.

Table 4: Sector Performance

No.	Performance Indicator	Minimum Acceptable Sector Benchmark	Sector performance 2020	Sector performance 2019
1	Water coverage	80%	86.8%	86.0%
2	Sanitation coverage	80%	68.9%	66.0%
3	Hours of supply	18hrs	18hrs	18hrs
4	Collection efficiency	95%	96.0%	82.0%
5	Cost coverage by collection	100%	95.0%	96.0%
6	Metering Ratio	100%	82.0%	81.0%
7	Non-Revenue Water	25%	52.8%	52.0%

c. Performance of Water Utility Companies

During the period under review, NWASCO undertook a number of inspections to assess the performance of water utility companies. Based on the findings from the inspections, the Council issued a number of directives to the companies to address specific issues of concern observed during the inspections. In particular, the following issues were outstanding as at 31st October 2021. See table 5 below.

Table 5: Performance of Water Utility Companies

No.	Name of Water Utility Company	Outstanding Issues
i.	Lukanga Water Supply and Sanitation Company	• The company delayed in making new connections and lacked a comprehensive maintenance management plan. • The company failed to establish the true status of all accounts marked as having stuck meters as well as those disconnected over time and ensure correct billing was applied accordingly.
ii.	Luapula Water Supply and Sanitation Company	The company did not implement MyWatsan quick fix complaints platform to ensure effective handling of complaints.

iii.	Southern Water Supply and Sanitation Company	The company did not meet the time bound plan on how unremitted kiosk sales would be collected from respective vendors.
iv.	Nkana Water Supply and Sanitation Company	The company did not put in place a functional maintenance management programme to enhance the working life of the facilities.

As at 31st December 2021, the above issues had not been addressed and NWASCO had not taken any follow up actions.

d. Operations of Private Water Supply and Sanitation Schemes

Section 4 (2) of the Water Supply and Sanitation Act No. 28 of 1997 (as amended by the Water Supply and Sanitation Act No. 10 of 2005) mandates NWASCO to licence water utility companies and other service providers relating to the provision of water and sanitation services.

During the period under review, NWASCO provided oversight to five (5) private water supply and sanitation schemes in addition to the eleven (11) water supply and sanitation companies.

Private schemes are companies that provide water supply and sanitation services primarily to their employees as a fringe benefit. The services are run as an auxiliary function but not on a commercial basis. During the period under review, there were five (5) licenced private schemes namely: Kaleya Smallholders Company Limited in Mazabuka, Konkola Copper Mines (KCM) in Nampundwe, ZESCO Limited (Itezhi Tezhi, Kafue Gorge and Victoria Falls), Zambia Sugar Plc in Mazabuka and Kafue Sugar Plc in Kafue.

During the period under review, the private water schemes were inspected to check their adherence to provisions of the Water Supply and Sanitation Act and guidelines that NWASCO developed to guide the operations of providers of water related services.

A physical inspection of three (3) private water schemes revealed the following:

i. **Erratic Water Supply – ZESCO Limited**

The Corporation continued to invest in Water Supply and Sanitation (WSS) infrastructure and constructed a new wastewater treatment plant at Kafue Gorge Power Station. However, the water supply in camp 3 Kafue Gorge was very erratic with the upper part of the township (blocks 9 and 11) not receiving any water.

ii. **Poor Maintenance of Ponds – Zambia Sugar Plc**

Zambia Sugar Plc operated one (1) scheme in Mazabuka. The scheme comprised water supply and sanitation infrastructure and wastewater stabilisation ponds. However, it was observed that due to poor maintenance, the wastewater stabilisation ponds at Nkabika and Njomona compounds were in a deplorable state in that they were overgrown with vegetation. See picture below**.**

Overgrown vegetation at waste water treatment ponds at Njomona

iii. **Erratic Water Supply – Kaleya Smallholders Company Limited**

Kaleya Smallholders Company Limited operated one (1) scheme in Mazabuka. The scheme comprised water supply and sanitation infrastructure. However, it was observed that there was erratic water supply in Mulundu B, Kaleya East and Barracks. In addition, there were broken taps causing leakages.

As at 30th September 2021, NWASCO had not taken any action against the three (3) companies for poor water supply and sanitation services which may give rise to waterborne diseases in their communities.

e. Financial Analysis

i. Financial Performance – Statements of Comprehensive Income

The NWASCO's Statements of Comprehensive Income for the financial years ended 31st December 2018, 2019 and 2020 were as shown in table 6 below.

Table 6: Statements of Comprehensive Incomes and Expenditure

Description	**2020 K**	**2019 K**	**2018 K**
Revenue			
Income	27,437,379	24,918,768	20,901,833
Other income	4,562,346	3,039,096	830,252
	31,999,725	**27,957,864**	**21,732,085**
Expenditure			
Personnel costs	11,822,781	10,004,241	9,102,485
Programme expenditure	4,362,149	5,087,541	3,659,827
Administration expenses	6,664,910	7,912,322	7,943,974
Other expenses	5,225,168	4,682,216	3,493,272
Finance Costs	259,362	50,582	179,427
	28,334,370	**27,736,902**	**24,378,985**
Surplus/ (Deficit) for the year	**3,665,355**	**220,962**	**(2,646,900)**
Other items of comprehensive income	-	-	-
Comprehensive income/(loss) for the year	**3,665,355**	**220,962**	**(2,646,900)**

Source: NWASCO financial statements for the years ended 31st December 2018, 2019 and 2020

In 2018, NWASCO recorded a deficit of K2,646,900 but recorded a surplus of K220,962 in 2019 and K3,665,355 in 2020. The surplus was as a result of the increase in income comprising mostly the license fees that increased from K21,732,085 in 2018 to K27,957,864 in 2019 and K31,999,725 in 2020.

ii. Financial Performance – Statements of Financial Position

The NWASCO's Statements of Financial Position for the Financial Years ended 31st December 2018, 2019 and 2020 were as shown in table 7 below.

Table 7: Statement of Financial Analysis

Financial Years Ended 31st December	2020 K	2019 K	2018 K
ASSETS			
Non Current Assets			
Property, plant and equipment	12,683,382	8,440,056	8,723,483
Current Assets			
Inventories	61,482	63,068	70,014
Trade and other receivables	4,419,620	8,803,167	5,934,505
Bank and cash balances	27,491,193	5,479,388	4,373,829
Total current assets	**31,972,295**	**14,345,623**	**10,378,348**
TOTAL ASSETS	**44,655,677**	**22,785,679**	**19,101,831**
EQUITY AND LIABILITIES			
EQUITY			
Revaluation reserve	7,305,424	4,837,737	4,946,050
Accumulated Funds	6695593	2,893,925	2,564,650
Total Equity	**14,001,017**	**7,731,662**	**7,510,700**
LIABILITIES			
Non current liabilities			
Deferred Income	3,154,793	151,457	368,481
Obligation under finance leases	693,092	-	239,292
Total non current liabilities	**3,847,885**	**151,457**	**607,773**
Current Liabilities			
Trade and other payables	26,452,460	14,373,445	10,307,712
Provisions	0	237,420	129,107
LUWSI Project	0	131,445	247,273
Obligation under finance leases	354,315	160,250	299,266
Total current liabilities	**26,806,775**	**14,902,560**	**10,983,358**
Total Liabilities	**30,654,660**	**15,054,017**	**11,591,131**
TOTAL EQUITY AND LIABILITIES	**44,655,677**	**22,785,679**	**19,101,831**

Source: NWASCO financial statements for the years ended 31st December 2020, 2019 and 2018

- **Debt to Equity Ratio**

Debt/equity ratio measures a company's debt relative to the total value of its equity. It helps to gauge the extent to which an entity is using borrowed capital to fund its operations and growth.

An analysis of the debt/equity ratio for NWASCO showed increasing reliance on debt finance for its operations as shown in table 8 below.

Table 8: Debt to Equity

Description	2020 K	2019 K	2018 K
Debt	30,654,660	15,054,017	11,591,131
Equity	14,001,017	7,731,662	7,510,700
Debt/Equity	**219%**	**195%**	**154%**

As can be seen from the table above, the debt/equity ratio for the NWASCO increased from 154% in 2018 to 195% in 2019 and 219% in 2020 implying higher financial risk in that the Council's reliance on debt continued to increase during the period under review.

- **Receivable Days**

The trade receivables ratio measures how much time it takes for trade debtors to settle their bills. According to the NWASCO financial procedures policy, the average time set between invoicing and collection of cash was thirty (30) days.

During the period under review, trade receivable days increased from 100 in 2018 to 115 in 2019 but reduced to 50 days in 2020. See table 9 below.

Table 9: Receivable Days

Description	2020 K	2019 K	2018 K
Trade Receivables	4,419,620	8,803,167	5,934,505
Revenue	31,999,725	27,957,864	21,732,085
Receivable Days	**50**	**115**	**100**

As can be seen from the table above, although trade receivable days reduced to 50 days in 2020, the days were still higher than the thirty (30) debtor's days' in the NWASCO financial procedures policy, implying that NWASCO failed to collect debt on time during the period under review.

f. Accounting Irregularities

i. Unsupported Payments

Financial Regulation Nos. 45 and 52 require that all payments by cheque or cash for goods, services and works should be supported by cash sale receipts and that vouchers relating to purchases should be supported by an official order and the supplier's invoices.

Contrary to the regulations, twelve (12) payments in amounts totalling K105,468 were not supported with documents such as cash sale receipts, attendance lists and activity reports.

ii. Irregular Use of Imprest

Financial Regulation No. 86 (c) states that, "Accountable imprest is imprest that is issued as payment to facilitate the purchase of goods and services whose value cannot be ascertained at the time".

Contrary to the regulation, an amount of K38,870 was issued as accountable imprest to an officer to procure goods and services such as facemasks, electricity units, DSTV subscription and cleaning services whose values could be ascertained and procured directly from the suppliers.

g. Management of Payroll - Failure to Fill Key Vacant Positions

NWASCO had an approved establishment of twenty three (23) positions out of which twenty (20) were filled leaving three (3) positions vacant, namely Corporate Analyst and two (2) Technical Inspectors for rural water and urban sanitation. The positions were key to the smooth running of the Organisation.

As at 31st October 2021, the positions remained vacant.

5. Water Resources Management Authority

5.1 Background

a. Establishment

The Water Resources Management Authority (WARMA) is a statutory body which was incorporated under the Water Resources Management Act No. 21 of 2011 and its core functions are:

i. Provide for the management, development, conservation, protection and preservation of water resource and its ecosystems;

ii. Provide for the equitable, reasonable and sustainable utilisation of the water resource; create an enabling environment for adaptation to climate change; provide for the constitution, functions and composition of catchment councils, sub-catchment councils and water users associations; and

iii. Provide for the domestication and implementation of the basic principles and rules of international law relating to the environment and shared water resources as specified in the treaties, conventions and agreements to which Zambia is a state party.

b. Governance

The Authority is governed by the board of directors comprising fourteen (14) members as follows:

i. Four (4) persons with expertise in any of the following:

- Environmental Management
- Hydropower
- Engineering; and
- Commerce and Industry

ii. One person each from the following groups:

- Farmers

- Traditional authorities; and
- Consumers

iii. A representative of the Attorney-General;

iv. One representative each of the Ministries responsible for

- Water resources,
- Local government,
- Agriculture
- The environment;

v. The Commissioner of Lands; and

vi. One other person.

Members of the board are appointed on three (3) year renewable terms. The Minister appoints the chairperson and vice chairperson of the board from among the members.

c. Management

The operations of WARMA is the responsibility of the Director General who is the Chief Executive Officer and is assisted by the Legal Counsel, Director Water Resources, Finance Manager, Human Resource Manager and Operations Manager.

The management team is appointed by the board on three (3) year renewable contracts.

d. Sources of Funds

The funds of the Authority shall consist of such moneys as may—

i. be appropriated to the Authority by Parliament for the purposes of the Authority;
ii. be paid to the Authority by way of fees, charges, grants or donations; and
iii. otherwise vest in or accrue to the Authority.

The Authority may—

i. accept moneys by way of grants or donations from any source in Zambia and subject to the approval of the Minister, from any source outside Zambia;

ii. subject to the approval of the Minister, raise by way of loans or otherwise, such moneys as it may require for the discharge of its functions; and

iii. in accordance with the regulations made under this Act, charge fees for services provided by the Authority.

5.2 Audit Findings

An examination of accounting and other records maintained at the Authority revealed the ` following:

a. Budget and Income

During the financial year ended 31st December 2020, the Authority budgeted to generate fees and receive grants from the Treasury and cooperating partners in amounts totalling K48,915,563 against which amounts totalling K54,227,762 were received and generated resulting in a positive variance of K5,312,199. See table 1 below.

Table 1: Budget and Income

No.	Source of Funds	Budget K	Income K	Variance K
1	Funding from Government	13,541,399	12,106,259	(1,435,140)
2	UNICEF	57,036	57,036	-
3	GIZ Local Subsidy	183,015	183,015	-
4	Water Use Charges	32,134,113	36,118,692	3,984,579
5	Profit on Sale of Fixed Asset		308,877	308,877
6	Registration of Boreholes	3,000,000	3,823,866	823,866
7	Penalty fee		1,564,250	1,564,250
8	Other Income		65,767	65,767
	Total	**48,915,563**	**54,227,762**	**5,312,199**

b. Operational Matters

i. Poor Funding of Catchment Areas

During the period under review, a total of K3,292,864 was budgeted for operational activities and approved for Kafue, Zambezi, Luangwa and Chambishi catchment areas, out of which amounts totalling K2,663,419 were released by the Authority resulting in under funding of K629,444 as shown in table 2 below.

Table 2: Budget and Income

No.	Catchment	Budget K	Income K	Variance K
1	Zambezi	882,380	676,438	(205,941)
2	Kafue	701,493	598,799	(102,694)
3	Luangwa	791,769	778,339	(13,430)
4	Chambishi	917,222	609,843	(307,379)
	Total	**3,292,864**	**2,663,419**	**(629,444)**

Consequently, twenty-five (25) hydrometric stations located in these catchment areas were non-functional thereby affecting the effective operations of the catchment areas including the proper maintenance of hydrometric stations which were critical in transmitting hydrometric information to the Head Office.

ii. Non-Collection of Water User Fees and Charges

Section 153 (1) and (2)(a) and (b) of the WARMA Act states that, "the Authority shall recover any fees or charges due and payable to the Authority as provided under section 176 or as may be prescribed. Where any Charges or Fees prescribed is not paid by any Water User, interest shall be payable at a rate to be prescribed by the Minister, during the period of the default, not exceeding the Bank of Zambia base rate; and the permit, licence or certificate to which the charge or fee relates may be suspended or restricted until the charges or fees and the interest have been paid."

Contrary to the Act, the Authority did not collect amounts totalling K6,544,709 for various water permits and licenses as at 31st July 2021. See table 3 below.

Table 3: Uncollected fees and charges

No.	Fees or Charges	Number of Customers/ Users	Period Outstanding	Amounts K
1	Agriculture - Water Charges	95	Over 1 year	3,251,588
2	Hydro Power - Water Charges	1	Over 1 year	912,099
3	Mining - Water Charges	13	Over 1 year	1,034,194
4	Water Utility Companies	10	Over 1 year	1,346,828
	Total			**6,544,709**

As at 31st July 2021, the Minister had not prescribed a rate for payment of interest and as a result, the Authority did not charge interest and penalties on the outstanding fees and charges.

iii. Failure to Meter Abstraction Points on the Lunsemfwa River in Luangwa Catchment

The Lunsemfwa River is one of the main tributaries of the Luangwa River. It drains the lower parts of the Luangwa Catchment in Central and Lusaka Provinces, particularly Mkushi, Serenje, Kapiri Mposhi, Kabwe, Chisamba, Luano and Rufunsa Districts. The Lunsemfwa is the most developed sub-catchment in the Luangwa Catchment in terms of water resources. Water in the sub-catchment is mainly used for agricultural (irrigation, livestock, aquaculture), hydro-electric, municipal, environmental, bulk water supply, industrial and mining purposes. The dominant uses in terms of volume are agriculture and hydro-electricity production.

Section 54 (2) of Part VI (Water Shortage Areas) of the Water Resource Management Act of 2011 stipulates that the rate or volume of water to be abstracted, as provided under subsection (1), may be fixed in relation to the area of land occupied by any person in the water shortage area or to any other circumstance which the Board considers relevant to the fixing of the rate or volume of water to be abstracted.

A review of the Summary Report on Lusemfwa Sub-catchment Rapid Water Assessment and Audit of Water Permits for the period under review revealed that out of the total of 206 Water Permit holders in the sub-catchment, forty five (45) did not have any metered abstraction point. See table 4 below.

Table 4: Water Permits Analysis

No.	Sub-Catchments	No of Permits Investigated	Unmetered Abstraction Points
1	Mulungushi and Lunsemfwa	63	20
2	Mkushi, Tembwe and Lunsemfwa	69	-
3	Munshibemba and Lukusashi	*74*	25
	Total	**206**	**45**

In this regard, it could not be ascertained whether the forty-five (45) clients were operating in accordance with the terms and conditions of the water permits which required that a fixed maximum volume of water may be abstracted from any water resource or water storage works and the maximum rate per month at which water may be abstracted from any borehole or any water storage works in a water shortage area.

iv. Weaknesses in the Management of Hydrometric Stations

WARMA operates sixty five (65) telemetric stations countrywide which were constructed at a total cost of K11,905,428. The stations were constructed to electronically transmit data to a central station in Lusaka for further analysis through the Integrated Water Resource Management Information System (IWRMIS) platform. The information transmitted includes river water level, water temperature and rainfall data which input into the catchment management plan and is used for daily flood forecasting.

A physical verification and inquiries made with management in March 2021 revealed weaknesses at nine (9) hydrometric stations as shown in table 5 below.

Table 5: Hydrometric Stations

No.	River	Stations	Type	Status During Audit
1	Chambeshi	Mbati	Telemetric	The station was submerged and was not transmitting data; battery had expired and had not been replaced at the time of the audit.
2	Lufubu	Chipili	Manual	There was inadequate staffing to carry out effective routine maintenance of equipment; as a result there were no gauge plates and the station was not remitting data.
3	Lake Mweru	Nchelenge	Telemetric	Battery and fuse had expired and had not been replaced at the time of audit; as a result the station was not remitting data.

No.	River	Stations	Type	Status During Audit
4	Kalungwishi	Olandi	Telemetric	The network was poor due to unstable signal reception; batteries had not been replaced and the station was not remitting data.
5	Mweru Wantipa	Kampinda	Telemetric	The network was poor due to unstable signal reception; battery and fuse had expired and had not been replaced at the time of audit. The station was submerged and was not transmitting data.
6	Bangweulu	Nsombo Harbour	Manual	The station was vandalised and not transmitting data.
7	Mutotoshi	Kapumo Falls	Telemetric	Battery had expired and not replaced; the station was not remitting data at the time of audit.
8	Luangwa	Mfuwe National Park	Telemetric	There was poor network experience due to unstable signal reception; as a result the station was not transmitting data at the time of audit.
9	Chambeshi	Old Pontoon	Telemetric	The battery had expired and had not been replaced at the time of audit; the water level sensor was damaged and the station was not transmitting data.

c. Accounting Irregularities - Failure to Insure Marine Equipment

A scrutiny of accounting and other records revealed that WARMA had twenty nine (29) boats with net book value of K6,886,694 as at 31st December 2020. However, the Authority did not take out marine insurance for the boats as at 31st July 2021.

6. Chambeshi Water Supply and Sanitation Company Limited

6.1 Background

a. Establishment

Chambeshi Water Supply and Sanitation Company (ChWSSC) Limited was incorporated in April 2003 as a private company limited by shares under the Companies Act Chapter 388 of the Laws of Zambia and the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation Act No. 10 of 2005.

The Company commenced its operations in 2003 with a mandate to provide water and sanitation services to customers in Northern and Muchinga Provinces. The Company's shareholding is as shown in table 1 below.

Table 1: Shareholding %

No.	Shareholders	Shareholding (%)
1	Kasama Municipal Council	12
2	Mpika Town Council	8
3	Nakonde Town Council	8
4	Mungwi Town Council	8
5	Luwingu Town Council	8
6	Chilubi Town Council	8
7	Isoko Town Council	8
8	Mbala Municipal Council	8
9	Mpulungu Town Council	8
10	Chinsali Municipal Council	8
11	Kaputa Town Council	8
12	Mporokoso Town Council	8
	TOTAL	**100**

b. Governance Structure

The Company is governed by a Board of Directors comprising ten (10) members as detailed below:

i. a Mayor or Chairperson from one of the participating Councils;
ii. a Town Clerk or Council Secretary from one of the participating Councils;

iii. the Provincial Local Government Officer or representative;
iv. a representative from the Engineering Institution of Zambia;
v. two (2) representatives from the private sector;
vi. a commercial consumer category representative;
vii. a domestic consumer category representative; and
viii. two (2) members appointed by the Minister, one of whom shall be the Chairperson of the Board.

The Board members hold office for a term of three (3) years and are eligible for reappointment upon expiry of their term of office but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the Company and is assisted by four (4) Directors responsible for Technical Services, Finance, Commercial Services and Human Resource and Administration.

d. Sources of Funds

The sources of funds for the Company include, such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The company also receives grants from the Government and Co-operating Partners.

e. Information and Communications Technology

During the period under review, ChWSSC Limited operated nine (9) Information and Communications Technology (ICT) systems as detailed below:

i. Sage Evolution System, an enterprise resource planning software used for finance management, information management and transaction management of the day-to-day operations of ChWSSC. It also contains a Municipal Billing Module used for Billing;
ii. Dove Payroll System used for payroll management;
iii. Precision Prepaid System used for prepaid water meter management;

iv. Baylan Prepaid Consumer Management System used for Prepaid Smart Water Meter management;
v. Perfect Billing used as a billing software up until November 2020 when it was replaced by the Municipal Billing Module in Sage Evolution System;
vi. Electronic Government Procurement System (e-GP) which is a web Based electronic Government procurement portal for goods and services administered by the Zambia Public Procurement Authority (ZPPA);
vii. National Water Supply and Sanitation Council (NWASCO) Information System (NIS) which is a web based Commercial Utility Information Management System administered by NWASCO;
viii. MyWatsan which is a Commercial Utility Web Based Complaint Management System administered by NWASCO; and
ix. MTN Bulk Messaging system is a web-based application used to send bills or notices to clients.

The ICT`s infrastructure also includes hardware such as computers, electronic water meters, printers and electronic modular water treatment plants in various districts across Northern and Muchinga Provinces. In addition, the infrastructure includes a server room which is centrally managed at the Company Head Office in Kasama, Northern Province.

6.2 Audit Findings

An examination of financial and other records maintained at the headquarters and regional offices for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services, connection charges in amounts totalling K57,757,940 against a budget of K59,067964 resulting in an adverse variance of K1,310,024 as shown in table 2 below.

Table 2: Budget and Income

No.	Source of Funds	2020 Budget K	2020 Income K	2019 Budget K	2019 Income K	Total Budget K	Total Income K	Variance K
1	Water Charges	27,900,620	29,764,220	29,931,330	23,162,709	57,831,950	52,926,930	(4,905,020)
2	Sanitation Charges	674,645	192,337	171,515	122,723	846,160	315,060	(531,100)
3	Other Water Revenue	196,714	391,353	193,140	4,124,598	389,854	4,515,950	4,126,096
	Total Revenue	**28,771,979**	**30,347,910**	**30,295,985**	**27,410,031**	**59,067,964**	**57,757,940**	(1,310,024)

In addition, the Company received a total amount of K66,588,154 as capital (K65,888,487) and revenue (K699,667 - impact of COVID -19) in form of grants from Government bringing the total income to K124,346,094.

As at 31st December 2020, out of the total income of K124,346,094, amounts totalling K111,027,951 had been spent leaving a balance of K13,318,143.

b. Corporate Governance - Failure to Hold Annual General Meeting

Section 57 (1) of the Companies Act No.10 of 2017 requires a company to hold an Annual General Meeting (AGM) within ninety (90) days after the end of each financial year of the company. Further, Section 57(4) states that "If a company fails to comply with this section, the company and each officer in default commits an offence and shall be liable, on conviction, to a fine not exceeding three thousand penalty units for each day that the failure continues".

Contrary to the Companies Act, there was no Annual General Meeting held during the year ended 31st December 2019.

c. Management of Information and Communication Technology Systems

i. Lack of Service Level Agreements

A Service Level Agreement (SLA) is a documented agreement between a service provider and a customer/user that define the minimum performance targets for a service and how they will be measured. SLAs are required in order to formalise the needs and expectations of the organisation and those of the service provider thereby minimising potential misunderstandings.

Contrary to the requirement, the Company had no Service Level Agreements with service providers of four (4) ICT Systems namely; Precision Prepaid, Baylan Prepaid, Consumer Management and MyWatsan Systems.

ii. Uninstalled Server

During the period under review, the Company procured a server for the Precision Prepaid System from Jarash Investment Limited of Lusaka at a cost of K240,000 (US$15,000). According to the terms and conditions of the contract, the supplier was required to deliver and install the server. Although the server was delivered in October 2020, a physical inspection of the server room carried out in August 2021, revealed that the server had not been installed eleven (11) months after it had been procured. See picture below.

Uninstalled Server for Precision prepaid System

As at 31st October 2021, the position had not changed.

iii. Lack of Segregation of Duties in ICT Systems

Best Information and Communications Technology (ICT) practice requires that no one individual should control all key aspects of a transaction or event and that the roles being performed by individuals should be designed with consideration to appropriate segregation of duties.

However, a test check of the Sage Evolution, Baylan Prepaid Consumer Management and the Electronic Government Procurement (e-GP) Systems revealed that all the three (3) IT officers who had system administrator rights to the applications had also full rights and privileges to carryout business processes such as ability to add, delete, view or modify accounting or customer data.

Further, it was noted that on the e-GP platform, the IT officers had rights to create and publish tenders, to approve the evaluation report, to award the final contract and publish the relevant notices. This resulted in non-segregation of duties thus rendering the systems susceptible to abuse and/or manipulation.

d. Operational Matters

i. Comparative Performance in the Water and Sanitation Sector

A review of NWASCO sector reports in relation to the performance of the Company for the years 2019 and 2020 revealed that it’s ranking dropped from position seven (7) in 2019 to nine (9) in 2020 out of the eleven (11) water utility companies in the country. The drop-in ranking was attributed to under performance in operational indicators. In particular, the following were observed:

- **Non - Revenue Water (NRW)**

  Non-Revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on un-metered customers’ premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network.

  However, the Company’s NRW was 37% and 35% in 2019 and 2020 respectively which resulted in a cumulative loss of K30,190,249. See table 3 below.

Table 3: Non - Revenue Water

No.	Details	2020 K	2019 K	Total K
1	Total Water Production (m3)	11,100,000	10,300,000	21,400,000
2	Total Water Billed (m3)	7,100,000	6,500,000	13,600,000
3	NRW(m3)	4,000,000	3,800,000	7,800,000
4	NRW(%)	35	37	
5	Benchmark (%)	25	25	
	Revenue loss on NRW (K)	**16,446,957**	**13,743,292**	**30,190,249**

The NRW above the benchmark deprived the Company of revenue to help improve its operations during the period under review.

- **Failure to Meet Water Quality Standards**

Water quality is important due to the health impact it has on the consumers. The overall compliance for water quality is assessed through sequential three (3) step process namely; confidence level, number of samples tested in relation to the minimum required and number of tests meeting the national drinking water standard. The benchmark for acceptable water quality set by NWASCO was a score greater or equal to 95% (≥ 95%).

In this regard, water utility companies are required to guarantee their customers an overall compliance of at least 95%.

However, a review of the water quality compliance revealed that the Company dropped from the acceptable benchmark of at least 95% in 2019 to below 95 % in 2020. See table 4 below.

Table 4: Water Quality Compliance

Year	Benchmark	Actual Water Quality Compliance
2019	≥95%	≥95%
2020	≥95%	<95%

- **Sanitation Coverage**

Sanitation Coverage is the proportion of the urban population with access to sanitation services. A review of the Sanitation Coverage operational indicator revealed that during the period under review, Company's sanitation cover was 66% in 2019 and 60% in 2020 which was below the NWASCO benchmark of 80%. See table 5 below.

Table 5: Sanitation Coverage

Year	Benchmark	Actual Sanitation Coverage	Variance
2019	80%	66%	-14%
2020	80%	60%	-20%

As a result, a substantial number of urban households did not have access to adequate sanitation which may compromise public health.

- **Staff Efficiency Indicator**

  This measures the output of personnel in relation to various aspects of operations such as billing, connections and personnel costs. The Staff Efficiency indicator compares the number of employees to the number of water connections. For the staff cost in relation to the billing and collection, NWASCO target for the sector was 0.4 (or 40%) or less. However, during the period under review, the Staff Efficiency indicator for the Company was 79% in 2019 and 65% in 2020 which was below the standard set by NWASCO. See table 6 below.

Table 6: Staff Efficiency Indicator

Year	Benchmark	Actual Staff efficiency Indicator
2019	≤40%	79%
2020	≤40%	65%

As a result, staff costs were high in relation to the operations thereby affecting the efficiency of the Company.

- **Operation and Maintenance Cost Coverage by Collection**

  This measures the extent to which the level of revenue collections from water and sanitation charges are able to cover all the operational costs. The calculation does not include income from other fees (penalties, meter charges, surcharges), Government and Co-operating partners. The acceptable benchmark for the sector was at least 100%. However, Company operation and maintenance cost stood at 83% in 2019 and 81% in 2020 which were below the set sector standard. See table 7 below.

Table 7: Cost Coverage by Collection

Year	Sector Benchmark	Actual Operation and Mainitenance Cost Coverage
2019	100-150%	83%
2020	100-150%	81%

It was further observed that the 83% and 81% recorded were also below the sector average of 96%.

ii. Irregularities in the Municipal Billing System

Commercial Policies No. 9 and 12 for the Company require account holders to provide their full details including names upon registration for opening or change of account name. Further, Commercial Policy No. 31 requires all information related to customer transactions to be maintained on a customer database centrally at Head Office with online access.

In addition, the customer services assistant is required to make all the entries on the customer records including billings and payments to be updated monthly. To do this, the Company used the Sage Evolution Municipal Billing System to maintain its customer database during the year under review. However, a review of the System revealed the following weaknesses:

- **Lack of Requisite Customer Details**

  There were 9,103 customers out of 27,827 on the database who had incomplete records on the system as they lacked contact details and names of the accounts. See table 8 below.

Table 8: Missing Information in the System

No.	Description	Total Number	Amount Owing as at 30.09.21 K
1	Accounts without customer names	29	124,049
2	Accounts without contact numbers	9,074	23,050,355
	Total	**9,103**	**23,174,403**

Consequently, the lack of phone numbers resulted in the failure by the Company to send alert messages and reminders to the customers using the Bulk Messaging System (BMS) which was currently being used at the Company for communicating monthly bills to customers.

In this regard, as at 31st October 2021, the Company was owed a total amount of K23,174,403 by customers with missing information.

- **Customers with Duplicate Account Numbers**

There were seventeen (17) customers who had duplicate accounts in the system as many as eight (8) times for some accounts. It was further observed that although information such as names, account numbers, balances and date of last payment for these accounts were the same, details such as area and location of those accounts were different.

The implication of duplicate customer accounts was that the company may lose its revenue through conflicting customer details which may result in failure to collect revenue. Further, this may result in an overstated figure of receivables in the accounts of the Company.

As at 31st October 2021, the outstanding amounts on the duplicate accounts stood at K142,020.

- **Metered Accounts without Meter Readings**

Commercial Policy No. 29.1 requires meter readings of customers to be taken and billed for services every month. A scrutiny of the customer accounts in the system revealed that there were 657 metered accounts which had neither previous nor current meter readings.

As at 31st October 2021, the accounts had an accrued balance of K962,232 in water bills.

- **Customers with Overdue Bills**

Commercial Policy No. 32 for the Company requires all customers who do not settle their bills by the 15th day following the month of billing to have their service withdrawn and served with an enforcement notice for purposes of encouraging them to pay. However, a review of the system revealed that there were 19,829 customers whose last payment dates were either not known or beyond three (3) months and as such were owing the company a total amount of K27,226,047. See table 9 below.

Table 9: Customers with Overdue Bills

No.	Number of Customers	Amount Owing K	Comment
1	9,773	23,154,460	Accounts without last known payment date
2	10,056	4,071,587	Last Payment date beyond three months as at 30th September 2021
Total	**19,829**	**27,226,047**	

As at 31st October 2021, services to the customers had neither been withdrawn nor were the defaulters served with enforcement notices.

- **Failure to Take Meter Readings of Water Kiosks**

Kiosks or public stand posts are public water points used as an alternative mode of service provision where it is not feasible to lay a network for individual connections such as unplanned high density (peri-urban) areas. A scrutiny of the database on kiosks maintained at the Company revealed that there were 157 kiosks under its control in Northern and Muchinga Provinces. Commercial Policy No. 29.1 of the Company requires meter readings of customers to be taken and billed for services offered every month by the water kiosks.

Contrary to the requirement, there were 115 kiosks entered in the system whose meter readings were not being taken resulting in the kiosks not being billed during the period under review. It was further observed that out of the 115 kiosks, only twenty two (22) had records of bill payments amounting to K3,842. Consequently, the amount was reflected as a negative balance in the accounts of the Company thereby overstating payables.

As at 31st October 2021, the remaining ninety three (93) kiosks had no record of any bill payment in the system despite the fact that eighty-eight (88) of them were functional.

iii. Unauthorised Cancellation of Bills - Baylan Prepaid System

Commercial Policy No. 24 on authorisation thresholds for financial adjustments requires adjustments to be approved by the District Manager for amounts below K200; the Finance Manager for amounts between K200 and K1,000; and for amounts above K1,000 by the Managing Director. Further, Commercial Policy No. 11 allows for debts to be written off with relevant approval and subsequent financial adjustments made under various circumstances such as proven wrong meter readings, customer not supplied with water, accounts billed while disconnected, leaking meter and debt swap.

Contrary to the policies, outstanding bills in amounts totalling K694,938 from 526 customer accounts were cancelled in the system during the period from April 2018 to July 2021 by the ICT officers who had no functional responsibility to make financial adjustments.

Further, there was no documentation such as approved adjustment forms, customer complaint letters and complaint verification forms.

iv. Questionable Drawing of Water - Mwanfushi Water Treatment Plant, Mpika

Water Quality Management Systems Manual Section No. 2.5.11 of the Company on prevention and contamination of water in Clear Well Tanks requires the treated water to be carefully stored to avoid being contaminated. To achieve this, the manhole in the Clear Well is required to be closed at all times except when checking water levels or when cleaning once every six months.

The Clear Well is the last stage in the water treatment process before it is pumped to the storage tanks for distribution and supply to consumers. Therefore any unauthorised opening of the Clear Well and submerging foreign objects such as pipes may contaminate the water thereby posing a risk to consumers.

However, a physical inspection of Mwanfushi Water Treatment Plant in Mpika district carried out in August 2021 revealed that there were two (2) individuals who were found drawing water directly from the Clear Well underground Tank using a diesel water pump.

As at 31st October 2021, the Company had not provided satisfactory explanation for the unauthorised access to the water treatment plant which is classified as a sensitive area in the water treatment process.

e. Accounting Irregularities

i. Lack of Audited Financial Statements

Section 265 (1) of the Companies Act No. 10 of 2017 requires that the board of directors should ensure that, within three (3) months following the end of the financial year, an audit is conducted, and the report of the financial affairs is signed by directors.

Contrary to the Act, the Company did not have audited financial statements for the years ended 31st December 2019 and 2020.

As at 31st October 2021, the position had not changed.

ii. Unaccounted for Revenue – Mulenga Hills Collection Point, Kasama

Financial Regulation No. 129 (1) of 2006 stipulates that the collectors of revenue are required to bring to account daily the whole amount of their collections.

During the period under review, amounts totalling K26,805 were reported to have been collected at Mulenga Hills collection point. However, the revenue was unaccounted for in that there were neither deposit slips nor was cash found at hand.

As at 31st October 2021, the funds had not been accounted for.

iii. Delayed Banking – Mulenga Hills Collection Point, Kasama

The Company's Financial Policy No. 5.2.3 states that, "all collections received must be banked within 24 hours of receipt; in case of collections received after banking hours, the funds should be banked before mid-day the following day."

Contrary to the company policy, there were delays in banking of revenue collected in amounts totalling K116,875 for periods ranging from two (2) to twenty (20) days.

iv. **Lack of Safe - Mpika and Nakonde Offices**

The Company's Financial Policy No. 5.6 (viii) states that, "No staff member is permitted to hold any cash at home on behalf of the Company overnight" and that "All cash must be deposited into the bank or with the Cashier in the safe."

Contrary to company policy, there were no Safe facilities at cash collection points in Mpika and Nakonde. It was further observed that the revenues collected were instead kept in drawers that were not lockable rendering the cash and accountable documents vulnerable to theft.

Consequently, the lack of safe led to the loss of cash due to theft on 29th November 2020 in amounts totalling K4,328 at the Nakonde Office.

v. **Unaccounted for Fuel**

Public Stores Regulation No. 16, requires that every stores officer or any other officer having in his charge any public stores or other articles of public property must keep and maintain record of receipt and issue of such public stores. Contrary to the regulation, fuel costing K88,413 procured during the period under review was not accounted for in that there were no receipt and disposal details.

f. Lack of Title Deeds

Section 41(4) of the Public Finance Management Act No. 1 of 2018 requires Controlling Officers to ensure that all public properties under their charge are secured with title deeds.

Contrary to the Act, the Company had not secured title deeds for parcels of land on which infrastructure such as office buildings, dams and water treatment plants valued at K11,718,439 was located as at 31st October 2021.

g. Management of Receivables

A review of the debtors' ledger revealed that as at 31st December 2020, the Company was owed amounts totalling K27,520,136 for outstanding water bills. See table 10 below.

Table 10: Outstanding Receivables

No.	Description	Amount K
1	Staff	874,087
2	Other Customers	26,646,049
	Total	**27,520,136**

The outstanding amount of K27,520,136 represents 91% of the Company's revenue of K30,347,910 in 2020. As at 31st October 2021, the situation had not changed.

h. Management of Payables

The Company had accrued debts in amounts totalling K49,449,302 in respect of personal emoluments and supplier bills such as ZESCO, Zamtel, Chemical and Engineering Supplies as at 31st December 2020. See table 11 below.

Table 11: Outstanding Payables

No.	Description	Amount K
1	Personal Emoluments	17,076,086
2	Suppliers Bills	32,373,216
	Total	**49,449,302**

Out of K32,373,216 owed to suppliers, K27,655,191 was outstanding for more than 180 days. As at 31st October 2021, the bills had not been settled.

i. Weaknesses in Infrastructure Projects Management

i. Delayed Payment to Contractors

In Paragraph 1 (h) (i) of the Special Report of the Auditor General on the Accounts of Water and Sanitation Companies for the Financial Year ended 31st December 2018, mention was made of delayed payments to contractors of amounts totalling K65,902,136 and US$3,741,850.25. According to the terms of the contract certificates of payment were to be settled within 28 days after being issued.

However, a review of the situation carried out in August 2021 revealed that out of the total certified works valued at K467,402,554 (K257,696,032 and US$12,482,531) in respect of six (6) projects carried out in Muchinga and Northern Provinces, amounts totalling K369,686,383 (K216,470,057 and US$9,120,019) had been paid leaving a balance of K97,716,171 (K41,225,975 and US$3,362,512).

As at 31st October 2021, the outstanding amount had not been cleared.

ii. Delayed Completion of Projects

A physical inspection of projects carried out in August 2021 in Nakonde and Mpulungu districts revealed that there were delays of three (3) years in completing projects and contractors were not on site as detailed in the table below.

Project	Contractor	Contract Date/ Period	Contract Sum	Amount Paid K	Scope of Work	Observation/Status
Construction and Rehabilitation of Water Supply Systems in Nakonde	China Gausu Engineering Corporation Ltd	19 March 2015 to 19 March 2016. Extended to November 2019	K33,900,342.64	K19,765,645.13	- Construction of a new raw water intake at the 'New Dam' - Construction of operator houses at the New Dam, Old Dam, Katozi and Mwenzo - Installation of 2 km DN315 HDPE water main from New Dam to Water Treatment Plant - Rehabilitation of pump stations at the Old Dam and Water Treatment Plant - Dredging of the Old Dam - Installation of 2.5km DN250 UPVC water main from Old Dam to the Water Treatment Plant	As at 30th September 2021, the project was 90% complete with the following major works outstanding. 1. Installation of a tank at Katozi,  ***Tank stand without 500m3 Tank at Katozi*** 2.Electrification of operator houses at Mwenzo, new and old dams, 3.Installation of four (4) pumps at old dam and Water Treatment

<table>
<tr><td></td><td></td><td></td><td></td><td></td><td>- Rehabilitation and replacement of filter media in the slow sand filters
- Installation of 1No. 300m^3/hr Modular Water Treatment Plant
- Construction of 1No. administrative office block
- Installation of the 500m^3 Katozi elevated water tank
- Rehabilitation of the existing 2,000m^3 concrete ground tank at Katozi water Distribution Center
- Completing installation of the 300m^3 elevated water tank in Mwenzo
- Installation of the water distribution network (46km)
- Installation of 500 prepaid water meters and 1513 post-paid water meters</td><td>Station,

Uninstalled water pump at old Dam Nakonde
4. Installation of a water supply network in Mwenzo, therefore, the tanks that were installed in 2017 were not in use as at 30th September 2021. See Picture below.

Tanks Installed but not in use at Mwenzo</td></tr>
</table>

					- Construction and equipping of two (2) boreholes in Mwenzo	5.Commissioning of new rising main from WTP to Katozi, 6.Supply of office furniture, 7. Painting of operator house at Katozi, and 8. Drilling one borehole and equipping the other drilled boreholes. As at 30th September 2021, the contractor was not on site.
Construction of Water Supply systems in Mpulungu	China Gausu Engineering Corporation Ltd	3rd February 2016 to December 2018	K167,252,051.91	K27,475,227.00	– Construction of raw water intake on Lake Tanganyika – Installation of a 4.5km rising main from raw water intake to WTP – Construction of new conventional WTP – Construction of 2No. water storage reservoirs – Construction of 1No. administration office block	As at 30th September 2021, only partial construction of the water intake at Lake Tanganyika had been done, which translated to 17% of the works, with the rest of works outstanding. See picture below.  **Partial construction of the water intake at the Lake.**

					– Installation of distribution network and metering to achieve 100% coverage – Construction of a 6.5 ML Water Treatment Plant including electromechanical equipment – Construction of reinforced concrete command reservoir at the water treatment plant – Construction of primary, secondary and tertiary distribution mains – Construction of new district office block	As at 30th September 2021, the contractor was not on site.

7. Eastern Water Supply and Sanitation Company Limited

7.1 Background

a. Establishment

Eastern Water Supply and Sanitation Company Limited (EWSSC) was incorporated in April 2003 as a private company limited by shares under the Companies Act Chapter 388 of the Laws of Zambia and the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation Act No. 10 of 2005.

The Company commenced its operations in 2008 with a mandate to provide water and sanitation services to customers in Eastern Province. The Company's shareholding is as shown in table 1 below.

Table 1: Shareholding %

No.	Shareholders	Number of Shares	Shareholding (%)
1	Chipata City Council	100,000	40
2	Lundazi Town Council	37,500	15
3	Katete Town Council	32,500	13
4	Chadiza Town Council	12,500	5
5	Chama Town Council	10,000	4
6	Petauke Town Council	32,500	13
7	Nyimba Town Council	12,500	5
8	Mambwe Town Council	12,500	5
	Total	**250,000**	**100**

b. Governance Structure

The Company is governed by a Board of Directors comprising ten (10) members as detailed below:

i. a Mayor or Chairperson from one of the participating Councils;

ii. a Town Clerk or Council Secretary from one of the participating Councils;

iii. the Provincial Local Government Officer or representative;

iv. a representative from the Engineering Institution of Zambia;

v. two (2) representatives from the private sector;

vi. a commercial consumer category representative

vii. a domestic consumer category representative; and

viii. two (2) members appointed by the Minister, one of whom shall be the Chairperson of the Board.

The Board members hold office for a term of three (3) years and are eligible for reappointment upon expiry of their term of office but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the Company and is assisted by three (3) directors responsible for Technical Services, Finance and Commercial Services and Human Resource and Administration.

d. Sources of Funds

The sources of funds for the Company include, such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The Company also receives grants from the Government and Co-operating Partners.

e. Information and Communications Technology (ICT)

During the period under review, the Company operated six (6) ICT software systems as detailed below:

i. Sage Evolution System used for accounting, inventory management, procurement and customer information management;

ii. Sage Municipal Billing used for billing customers;

iii. Sage HR used for staff related matters;

iv. Sage VIP Premier used for processing the payroll;

v. Trumeter system used in collecting meter readings digitally, real time monitoring of meter readings and meter reader performance; and

vi. MyWatSan used for compliance management.

7.2 Audit Findings

An examination of financial and other records maintained at the headquarters and regional offices for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services, connection charges in amounts totalling K90,510,880 against a budget of K126,190,764 resulting in an adverse variance of K35,679,884. See table 2 below.

Table 2: Budget and Income

No.	Source of Funds	2020		2019		Total Budget	Total Income	Variance
		Budget K	Income K	Budget K	Income K	K	K	K
1	Water Charges	42,750,376	35,433,770	42,295,062	32,435,978	85,045,438	67,869,748	(17,175,690)
2	Sanitation Charges	1,337,816	1,073,484	1,528,600	1,095,259	2,866,416	2,168,743	(697,673)
3	Other Water Revenue	25,577,275	13,071,185	12,701,635	7,401,204	38,278,910	20,472,389	(17,806,521)
	Total Revenue	**69,665,467**	**49,578,439**	**56,525,297**	**40,932,441**	**126,190,764**	**90,510,880**	**(35,679,884)**

As at 31st December 2020, out of the total income of K90,510,880, amounts totalling K90,006,515 had been spent leaving a balance of K504,365.

b. Financial Analysis - Statement of Comprehensive Income

Statements of Comprehensive Income for the financial years ended 31st December 2019 and 2020 were as shown in table 3 below.

Table 3: Statement of Comprehensive Income

Details	2020 K	2019 K
Turnover	36,804,623	34,210,857
Cost of Sales	12,982,947	7,131,745
Gross profit	23,821,676	27,079,112
Other Operating income	12,773,816	6,721,584
Other operating gains/(losses)	-	(51,234)
Operating expenses	(51,815,647)	(38,190,868)
Operating Loss	**(15,220,155)**	**(4,441,406)**
Finance costs	(57,417)	-
Loss before Taxation	(15,277,572)	(4,441,406)
Taxation	4,280,006.00	(1,777,704.00)
Loss after Taxation	**(10,997,566)**	**(6,219,110)**

Profitability

As can be seen from the Statement of Comprehensive Income in table 3 above, the company incurred losses of K6,219,110 in 2019 and K10,997,566 in 2020. The losses were attributed to high operating expenses of K38,190,868 and K51,815,647 which accounted for 111.6% and 140.8% of turnover in 2019 and 2020 respectively.

c. Operational Matters

i. Comparative Performance in the Water and Sanitation Sector

A review of the National Water and Sanitation Council (NWASC) Sector reports in relation to the performance of the Company for the financial years ended 31st December 2019 and 2020 revealed that the Company's ranking improved from position four (4) in 2019 to two (2) in 2020 out of the eleven (11) water utility companies in the country.

However, the following were observed:

- **Non - Revenue Water (NRW)**

  Non-Revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on un-metered customers' premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network.

  However, the Company's NRW was 43% in both 2019 and 2020 resulting in a cumulative revenue loss of K44,281,818. See table 4 below.

Table 4: Non - Revenue Water

No.	Details	2020	2019	Total
1	Total Water Production (m3)	5,700,000	5,500,000	11,200,000
2	Total Water Billed (m3)	3,280,000	3,130,000	6,410,000
3	NRW(m3)	2,420,000	2,370,000	4,790,000
4	NRW(%)	43%	43%	
5	Benchmark (%)	25	25	
	Revenue loss on NRW (K)	**23,115,033**	**21,166,785**	**44,281,818**

The NRW above the benchmark deprived the Company of the revenue to help improve its operations during the period under review.

- **Operation and Maintenance Cost Coverage by Collection**

  This measures the extent to which the level of revenue collections from water and sanitation charges are able to cover all the operational costs. The calculation does not include income from other fees (penalties, meter charges, surcharges), Government and Co-operating partners. The acceptable benchmark for the sector was at least 100%.

  However, the Company operation and maintenance costs stood at 57% in 2020 and 75% in 2019 which was below the sector standard. See table 5 below.

Table 5: Cost Coverage by Collection

Year	Sector Benchmark	Actual Operation and Mainitenance Cost Coverage
2019	100-150%	75%
2020	100-150%	57%

It was further observed that the 75% and 57% recorded were also below the sector average of 96%.

- **Staff Efficiency Indicator**

  This measures the output of personnel in relation to various aspects of operations such as billing, connections and personnel costs. The Staff Efficiency indicator compares the number of employees to the number of water connections. For the staff cost in relation to the billing and collection, NWASCO target for the sector was 0.4 (or 40%) or less.

  However, during the period under review, the Staff Efficiency indicator for the Company was 82% in 2019 and 81% in 2020 which exceeded the 40% or less standard set by NWASCO. See table 6 below.

Table 6: Staff Efficiency Indicator

Year	Benchmark	Actual Staff efficiency Indicator
2019	≤40%	82%
2020	≤40%	81%

As a result, staff costs were higher in relation to the operations thereby affecting the efficiency of the company.

ii. Delays in Making New Connections for Paid-Up Customers

Company Policy No. 10.2 requires that connection to water and sanitation network system should be done within ten (10) working days after full payment by a customer.

Contrary to the policy, there were delays of periods ranging from 16 to 594 days to make new connections for 116 customers who had paid connection fees in amounts totalling K150,040 as at 31st December 2020. See table 7 below.

Table 7: Delayed Connections

No.	District	Amount Paid K	No. of Customers	Delays in Days
1	Chipata	87,120	67	16 to 287
2	Petauke	54,120	41	32 to 352
3	Nyimba	8,800	8	32 to 594
		150,040	**116**	

d. Management of Payroll and Staff Related Matters

i. Litigation Costs – Wasteful Expenditure

On 2nd May 2018, a former Commercial Assistant at Chipata office was granted a two (2) year unpaid leave with the view to be re-engaged upon expiry of the leave subject to the availability of the position.

In this regard, on 12th February 2020, the officer informed the Company of his intention to resume work on 2nd May 2020, but the Company informed the officer of the non-availability of the position. However, in March 2020, the Company employed two (2) officers to fill the position of Commercial Assistant at the Chipata and Petauke offices.

Therefore, on 14th July 2020 the officer sued the Company for constructive dismissal and on 31st March 2021, the court awarded the officer a total amount of K206,826 as compensation (K194,275) and interest (K12,551).

It was observed that a total amount of K206,826 was paid to the officer on 29th June 2021 and on 16th September 2020 an amount of K20,000 was paid as legal fees. The payment of K239,377 comprising compensation K206,826, legal fees (K20,000) and interest (K12,551) was wasteful as it could have been avoided had the officer been re-engaged in line with agreement.

ii. Outstanding Receivables

A review of the debtors' ledger revealed that Company was owed amounts totalling K16,065,187 as at 31st December 2020. See table 8 below.

Table 8: Outstanding Receivables

No.	Customer type	Total K
1	Domestic Customers	8,864,866
2	CommercialCustomers	3,008,242
3	Government Institutions	3,607,797
4	Water Kiosks	584,282
	Total	**16,065,187**

As at 30th September 2021, the position had not changed.

e. Management of Liabilities

i. Outstanding Statutory Obligations

Income Tax Act Chapter 232 of Laws of Zambia requires Pay As You Earn (PAYE) to be deducted from officers' emoluments and remitted to the Zambia Revenue Authority.

Clause 14 (1) of the National Pensions Scheme Authority (NAPSA) Act No. 40 of 1996 requires that a compensating employer shall pay to the scheme a contribution in respect of an employee in his or her employment consisting of employer's contribution and the employee contribution at the prescribed percentage.

Contrary to the Acts, the Company had outstanding amounts totalling of K20,207,904 in unremitted statutory obligations such as PAYE, pension contributions and insurance. See table 9 below.

Table 9: Outstanding Statutory Obligations

No.	Detail	As at 31.12.2020 K
1	PAYE	17,432,584
2	NHIMA	43,976
3	Workers Compensation	380,341
4	LASF	1,201,889
5	NAPSA	1,149,115
	Total	**20,207,904**

ii. Outstanding Staff Obligations

As at 31st December 2020, EWSSC had accrued debts in amounts totalling K1,203,999 in respect of retirement and gratuity and terminal benefits for the staff. See table 10 below.

Table 10: Outstanding Staff Obligations

No.	Details	As at 31.12.2020 K
1	Retirement and Gratuity	982,740
2	Terminal Benefits	221,260
	Total	**1,203,999**

8. Kafubu Water Supply and Sanitation Company Limited

8.1 Background

a. Establishment

The Kafubu Water Supply and Sanitation Company (KWSSC) Limited was incorporated in September 1998 as a private company limited by shares under the Companies Act Chapter 388 of the Laws of Zambia and the Water Supply Act No. 28 of 1997 as amended by the Water Supply and Sanitation Act No. 10 of 2005.

The Company commenced its operations in July 2000 following the signing of the Statutory Instrument No. 55 of 2000 with a mandate to provide water and sanitation services to customers in Ndola, Luanshya and Masaiti districts.

The Company also exercises overall control over the sources and supply of water and has the responsibility to conserve, redistribute and augment those water resources in the area falling under the jurisdiction of Ndola, Luanshya and Masaiti Councils. The Company's shareholding is as shown in table 1 below.

Table 1: Shareholding %

No.	Shareholder	Shareholding %
1	Ndola City Council	87
2	Luanshya Municipal Council	12
3	Masaiti Town Council	1
	Total	**100**

b. Governance Structure

The Company is governed by a Board of Directors comprising ten (10) members as detailed below:

i. a Mayor or Chairperson from one of the participating Councils;
ii. a Town Clerk or Council Secretary from one of the participating Councils;
iii. the Provincial Local Government Officer or representative;
iv. a representative from the Engineering Institution of Zambia;
v. two (2) representatives from the private sector;
vi. a commercial consumer category representative
vii. a domestic consumer category representative; and

viii. two (2) members appointed by the Minister, one of whom shall be the Chairperson of the Board.

The Board members hold office for a term of three (3) years and are eligible for reappointment upon expiry of their term of office but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the Company and is assisted by five (5) directors responsible for Planning and Development, Finance, Commercial Services, Engineering and Human Resource and Administration.

d. Sources of Funds

The sources of funds for the Company include, such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The Company also receives grants from the Government and Co-operating Partners.

e. Information and Communications Technology (ICT)

During the period under review, KWSSC Limited operated three (3) Information and Communications Technology (ICT) systems as detailed below:

i. Sage Evolution System used for finance management, information management and transaction management. It also contains Municipal Billing Module used for billing;

ii. Dove Payroll System used for payroll management of staff; and

iii. Kafubu Water Prepaid System handles prepaid meters.

8.2 Audit Findings

An examination of financial and other records maintained at the Headquarters and regional offices for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services, connection charges in amounts totalling K301,741,108 against a budget of K420,309,500 resulting in an adverse variance of K22,016,118 as shown in table 2 below.

Table 2: Budget and Income

No.	Source of Funds	2020		2019		Total Budget K	Total Income K	Variance K
		Budget K	Income K	Budget K	Income K			
1	Water Charges	162,850,000	111,172,459	120,781,500	116,050,502	283,631,500	227,222,961	(56,408,539)
2	Sanitation Charges	65,142,000	31,878,967	48,312,600	35,449,310	113,454,600	67,328,277	(46,126,323)
3	Other Water Revenue	11,611,700	-	11,611,700	7,189,870	23,223,400	7,189,870	(16,033,530)
	Total	**239,603,700**	**143,051,426**	**180,705,800**	**158,689,682**	**420,309,500**	**301,741,108**	**(22,016,118)**

b. Corporate Governance

i. Failure to Hold Annual General Meeting

Section 57 (1) of the Companies Act No.10 of 2017 requires a company to hold an Annual General Meeting (AGM) within ninety (90) days after the end of each financial year of the company.

Further, Section 57 (4) states that, "If a company fails to comply with this section, the company and each officer in default commits an offence and shall be liable, on conviction, to a fine not exceeding three thousand penalty units for each day that the failure continues".

Contrary to the Act, there were no Annual General Meetings held in 2019 and 2020.

ii. Lack of Contract for External Auditors

On 24th March 2020, the Board appointed Grant Thornton to audit the 2019 financial statements for the Company. However, the contract with Grant Thornton was not availed for audit making it not possible to ascertain the terms on which the audit was based and how the amount of K810,115 that was paid between 19th August and 23rd November 2020 as audit fees was arrived at.

Further, as at 31st October 2021, the audit of financial statements for the Company had not been completed.

c. Management Information Technology Systems

i. Lack of Governance Framework

There are several standards and frameworks, which are applicable internationally and generally used in the implementation, operation and auditing of Information and Communication Technology (ICT) environments. These include the following:

- Information System Audit and Control (ISACA) - Control Objectives for Information and related Technologies (CoBIT),
- The Information Technology Infrastructure Library (ITIL),
- ISO 27001 Information Security Management Systems, and
- ISO/IEC 20000 – Information Technology Security Management Standard.

Despite the availability of various standards and frameworks, which are applicable internationally and generally in the implementation, operation and auditing of Information and Communication Technology (ICT) environments, the Company had not adopted any ICT Standards and frameworks for managing its ICT operations during the period under review.

ii. Use of Operating Systems at End of Life Support

According to ISO/IEC 27001, an organisation should obtain timely information about technical vulnerabilities of information systems being used and the exposure of such vulnerabilities should be evaluated, and appropriate measures taken to address the associated risks.

Further, Microsoft Corporation, the proprietor of Microsoft products announced through its bulletins that the support services for the Windows 7 operating system will expire on 14th January 2020 while windows 8 pro expired on 12th January 2016.

During the period under review, the Company had thirty nine (39) computers using Windows 7 operating system (29) and Windows 8 pro (10) which were no longer supported.

Consequently, the computers were susceptible to malware and virus attacks that could compromise data on the system.

iii. Inadequate Physical and Environmental Controls over the Server Room

COBIT 5 DSS01.04 stipulates that an organisation should regularly monitor and maintain devices that proactively detect environmental threats.

Further, best practice requires that a server room should be kept in a conducive and safe condition at all times and has restricted access.

A physical verification of the server room carried out in September 2021 revealed the following:

- There were no automatic fire suppression systems such as gas expellers, smoke detectors and water sprinklers that were installed in the room.
- Entry to the server room was through ordinary lock and key as the server room door was not secured with a grill door or logical access such as biometric readers.

iv. Lack of Disaster Recovery Site

COBIT 5 DSS04.02 stipulates that the IT function should evaluate business continuity management options and choose a cost-effective viable continuity strategy that will ensure enterprise recovery and continuity in the face of disaster or other major incident or disruption.

Although the Company had a disaster recovery plan, there was no disaster recovery site that had been created as at 30th September 2021. Consequently, in a case of a disruptive event such as power outage, system failure or fire, the company had no infrastructure to continue business operations.

v. Lack of Offsite Backup Site

COBIT 5 DSS04.07 stipulates that the IT function should define requirements for onsite and offsite storage of backup data that meet the business requirements.

Contrary to the requirement, during the period under review, the Company was maintaining its live production information as well as the backup's onsite thereby exposing the institutional data to single point of failure in the event of any unforeseen circumstances.

vi. Lack of Control Over Promun Database

During the period under review, the Company had stored its customer records on the progress database for which it pays K296,613 (R250,354) annually for licensing and licensing materials on the Promun application and database. The promun system was used to manage various modules such as finance, human resources and procurement.

ISO/IEC 27001A11.3.1 requires that all information and assets associated with information processing facilities shall be owned and protected by a designated part of the organisation.

Contrary to the requirement, the vendor had access to the customer, employee and other confidential information/records contained on database. Although, the Company could create users, load programmes and change customer records, it had no direct access to the Promun database, as the database schema and various table structure housing the confidential information were only known and managed by the vendor.

d. Operational Matters

i. Comparative Performance in the Water and Sanitation Sector

A review of the National Water and Sanitation Council (NWASCO) sector reports in relation to the performance of Kafubu Water Supply and Sanitation Company for the years 2019 and 2020 revealed that the Company's ranking improved from position six (6) in 2019 to position five (5) in 2020 out of the eleven (11) water utility companies in the Country. In particular, the following were observed:

- **Non - Revenue Water (NRW)**

  Non-Revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on un-metered customers' premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network. However, the Company's NRW was 75% in 2019 and 72% in 2020 which resulted in a cumulative loss of K599,353,484. See table 3 below.

Table 3: Non - Revenue Water

No.	Details	2020	2019	Total
1	Total Water Production (m3)	73,200,000	68,200,000	141,400,000
2	Total Water Billed (m3)	18,260,000	19,180,000	37,440,000
3	NRW(m3)	54,940,000	49,020,000	103,960,000
4	NRW(%)	75%	72%	
5	Benchmark (%)	25%	25%	
	Revenue loss on NRW (K)	**328,086,755**	**271,266,729**	**599,353,484**

The NRW above the benchmark deprived the Company of the revenue to help improve its operations during the period under review.

- **Sanitation Coverage**

  Sanitation Coverage is the proportion of the urban population with access to sanitation services. A review of the Sanitation Coverage operational indicator revealed that during the period under review, the Company's sanitation cover was 73% in 2020 which was below the NWASCO benchmark of 80%.

As a result, a substantial number of urban households did not have access to adequate sanitation which may compromise public health.

- **Metering Ratio**

Metering ratio is a proportion of the metered connections compared to the total connections. Metering enables a water utility company to measure the total amount of water provided and consumed and it aids charging of consumers for the water consumed. It is an important tool with regards to controlling Non-Revenue Water. The acceptable benchmark for metering ratio was 100%. However, during the period under review, the Company only managed to attain 69% in 2019 and 71% in 2020. See table 4 below.

Table 4: Metering ratio

Period	Benchmark (%)	Metering Ratio (%)	Variance (%)
2019	100	69	31
2020	100	71	29

Failure to meter all the customers may result in revenue loss to the Company.

- **Collections Efficiency Standard**

The Collection Efficiency is the proportion of billed amounts collected against actual collections. Billed amounts in this regard refers to the revenue that a utility company expects from the provision of water and sanitation services and excludes charges like reconnection fees, penalties and meter charges. The acceptable NWASCO benchmark for collection efficiency is 85%.

A scrutiny of the Sector Report for 2019/2020 revealed that the Company failed to meet the benchmark in 2019 as it only achieved 59.9%.

ii. Commercial Customers Billed as Domestic Customers

Clause 7.3 of the Company's Commercial Policy stipulates that customers be categorised according to the tariff guidelines. Customers are categorised as either domestic, non-domestic/commercial/industrial or water kiosks, based on the type of customer.

The policy further states that the customers shall fall into categories according to the activities taking place at the premises as follows:

- Domestic – shall be applicable to all premises used exclusively for dwelling purposes.
- Non-Domestic/Commercial/Industrial – shall be applicable to all premises that are used for business activities of any kind.

A comparison of the customer master file and the billing report revealed that 127 commercial customers were billed as domestic customers. In this regard, the customers were billed amounts totalling K168,131 instead of K305,882 resulting in an under charge of K137,750.

As at 31st October 2021, the anomaly had not been corrected.

e. Accounting Irregularities

i. Lack of Audited Financial Statements

Section 265 (1) of the Companies Act No. 10 of 2017 requires that the board of directors should ensure that, within three months following the end of the financial year, an audit is conducted, and the report of the financial affairs is signed by directors.

Contrary to the Act, the Company did not have audited financial statements for the years ended 31st December 2019 and 2020.

As at 31st October 2021, the position had not changed.

ii. Failure To Withhold Withholding Tax

Section 82a (1c) of the Income Tax Act No. 3 of 1997 requires that every person or partnership making a payment of rent from a source within a Republic should before making any other deduction deduct tax from the payment.

During the period under review the withholding tax on rental income was at ten percent (10%).

Contrary to the Act, amounts totalling K1,107,676 were paid as rent by the Company without withholding tax at 10% amounting to K110,768.

As at 31st October 2021, the anomaly had not been corrected.

f. Failure to Fill Key Vacant Positions

During the period under review, the Company had an establishment of 783 positions out of which 568 were filled leaving 189 vacant as at 31st December 2020. Out of the vacant positions, five (5) namely Managers of Water Production, Water Distribution, Electrical, Sewerage Services and Safety and Quality were key to the running of the Company.

As at 31st October 2021, the positions remained unfilled.

g. Poor Maintenance of Properties

The Company owns thirty-nine (39) residential houses at Kafubu Dam. A physical inspection carried out on 28th August 2021 revealed that the houses were dilapidated with most them having serious defects such as broken windows and doors, several cracks on walls and floors, missing electrical fittings, leaking roofs and peeling off paints among other defects.

As at 30th September 2021, the houses had not been rehabilitated and only ten (10) were occupied while the remaining twenty-nine (29) were vacant. Enquiries with management revealed that the twenty-nine (29) houses have been vacant since 2017. See pictures below.

Staff houses with broken windows

It was also observed that the Company was not regularly maintaining its water and sewer lines. A physical inspection of a sewer lines carried out in September 2021 in Chifubu Compound of Ndola revealed that supporting concrete for the manholes that were fitted with steel covers were eroded, there by exposing the covers to theft and vandalism. Consequently, during the period 2019 and 2020, the Company lost twenty (20) steel covers in Chifubu (Ndola) and Roan (Luanshya) valued at K34,900 through theft. See picture below.

Exposed steel covers

Although the Company had replaced the stolen steel covers with concrete covers, some of the new covers were poorly installed leaving gaps in the manholes. See picture below.

Poorly installed concrete cover on manhole

h. Outstanding Receivables

According to the Company's Commercial Service Policy part 6.3.2(i), a customer is required to pay the water bill within a period of fourteen (14) days upon receipt of the water bill.

Contrary to the policy, a review of the debtors' ledger revealed that Company was owed amounts totalling K353,184,794 in unpaid water bills some of which had been outstanding for over six (6) years. It was also observed that the debt increased from K345,442,894 in 2019 to K353,184,794 in 2020 despite a debt write off of K2,050,633 in 2020. Included in the receivables was an amount of K77,913,912 which was owed by various Government Ministries and Departments.

As at 30th September 2021, the debt had increased to K385,563,600.

i. Management of Liabilities

i. Outstanding Bills

As at 31st December 2020, the Company had outstanding bills in amounts totalling K67,143,948 in respect of suppliers, personal emoluments and utility bills such as electricity and telephone services.

As at 30th September 2021, the bills had not been settled.

ii. Failure to Remit Statutory Contributions

Income Tax Act Chapter 323 of the Laws of Zambia requires that Pay As You Earn (PAYE) be deducted from officers' emoluments and be remitted to the Zambia Revenue Authority (ZRA).

Section 15(1) of the National Pensions Scheme Act of 1996 requires that a contributing employer should pay to a contribution to the Authority at end of each month and such employer should submit, with such payment, all prescribed supporting particulars concerning his identity, period of employment and earnings to whom the contributions relate.

Contrary to the Acts, amounts totalling K47,295,314 deducted during the period under review had not been remitted to ZRA and NAPSA respectively as at 31st October 2021. See table 5 below.

Table 5: Statutory Contributions

No.	Details	2020 Amount K	2019 Amount K	Total K
1	Zambia Revenue Authority (PAYE)	22,282,540	18,384,941	40,667,482
2	NAPSA	3,240,718	3,387,114	6,627,832
	Total			47,295,314

j. Projects Management - Stalled Works at Kafulafuta Water Supply System Project

On 10th February 2016, the Government through the then Ministry of Local Government and Housing signed a contract with China National Complete Engineering Corporation at a contract sum of US$449,090,627.71 for the design and construction of the Kafulafuta water supply and sanitation system. The contract was for a period of forty-two (42) months commencing 10th February 2016 and ending on 9th July 2019.

The objective of the project was to increase water supply in Ndola, Luanshya, Masaiti and Mpongwe districts. The scope of works included the following:

i. Clearing and disinfecting of 4,000 hectares of land in submerged area including resettlement of 400 housing units that would be affected by the works;

ii. Construction of a river dam in Ibenga area;

iii. Construction of 2 reservoirs one (1) in Misundu - Ndola and one (1) Kamirenda - Luanshya.

iv. Construction of water intake and midway pump stations;

v. Installation of pipelines for raw and treated water;

vi. Construction of KWSSC head office and supply office furniture;

vii. Construction of ten (10) staff houses;

viii. Rehabilitation of transformer houses in Misundu 1 and Ndola;

ix. Creation of water supply system in Mpongwe and extension of water supply to unserviced areas in all the districts; and

x. Replacement/ repair of network in Ndola, Masaiti and Luanshya;

As at 30th September 2021, a total amount of US$291,972,843.73 had been paid to the contractor leaving a balance of US$157,117,793.96 on the contract price.

A review of the contract document revealed that certificates of payments were to be settled within sixty (60) days after being issued and that interest at existing bank rates would apply on a daily basis following the expiry of the sixty (60) days.

However, as at 30th September 2021, the contractor was owed amounts totalling US$101,896,132.92 in four (4) unpaid interim payment certificates which were outstanding for periods exceeding sixty (60) days. See table 6 below.

Table 6: Unsettled IPCs

IPC No.	Amount K	Period Delayed as at 30th September 2021
10	37,170,121	742 days
11	26,248,994	687 days
12	20,967,155	634 days
13	17,509,864	247 days
Total	**101,896,133**	

Consequently, on 5th February 2020, the contractor abandoned the site on account of non-payment with the following works outstanding:

i. Construction of a wall fence and installation of lighting and monitoring system at the dam.
ii. At the Intake Pump Station, the Chlorination room was at roof level while external works such as landscaping, and driveway and installation of intake pump units, electrical equipment and self-control equipment had not been done.
iii. At the Midway Pump Station, the Chlorination room was at roof level while external works such as landscaping and driveway and installation of pump units, valves, pipes, electrical equipment and self-control equipment in the pump house and reservoir had not been done.
iv. Construction of Kafubu Water and Sanitation Head Office and supply of furniture had not been done
v. Out of ten (10) staff houses, nine (9) were at roof level while one (1) was at window level.

9. Luapula Water Supply and Sanitation Company Limited

9.1 Background

a. Establishment

Luapula Water Supply and Sanitation Company (LpWSSC) Limited was established under Section 9 (c) part III of the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation Act No. 10 of 2005.

The Company was incorporated as a private company limited by shares in 2008 under the Companies Act Chapter 388 of the Laws of Zambia. The company commenced its operations in 2009 with a mandate to provide water and sanitation services to customers in the province.

The Company's shareholding is as shown in table 1 below.

Table 1: Shareholding %

No.	Shareholders	Shareholding %
1	Mansa Municipal Council	14
2	Samfya Town Councill	14
3	Mwense Town Councill	14
4	Kawambwa Town Councill	14
5	Nchelenge Town Councill	14
6	Milenge Town Council	14
7	Chienge Town Council	14
8	Lunga Town Council	2
	Total	**100**

b. Governance Structure

The Company is governed by a Board of Directors comprising ten (10) members as follows:

i. a Mayor or Council Chairperson from participating councils;

ii. a Town Clerk or Council Secretary from participating councils;

iii. a Provincial Local Government Officer or representative;

iv. a representative from the Engineering Institute of Zambia;

v. two (2) representatives from the Private Sector;

vi. a community representative from the domestic consumer category; and

vii. Two (2) members appointed by the Minister, one of whom shall be the Chairperson of the Board.

The Board members hold office for a term of three (3) years and are eligible for reappointment upon expiry of their term of office but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the company and is assisted by three (3) senior managers responsible for Finance and Commercial, Human Resource Management and Engineering.

d. Sources of Funds

The sources of funds for the Company include, such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The Company also receives grants from the Government and Co-operating Partners.

e. Information and Communications Technology (ICT)

During the period under review, the company operated four (4) ICT Systems namely;

i. Sage Evolution for processing of accounting transactions;
ii. Piano Billing for administration of billing transactions;
iii. Dove Payroll for administration of payroll; and
iv. LAPIS for administration of prepaid metered transactions.

9.2 Audit Findings

An examination of financial and other records maintained at the headquarters and regional offices for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services, connection charges in amounts totalling K19,204,079 against a budget of K22,599,000 resulting in an adverse variance of K3,394,921 as shown in table 2 below.

Table 2: Budget and Income

No.	Source of Funds	2020 Budget K	2020 Income K	2019 Budget K	2019 Income K	Total Budget K	Total Income K	Variance K
1	Water Charges	9,815,000	8,036,119	9,558,000	8,473,750	19,373,000	16,509,869	(2,863,131)
2	Sanitation Charges	490,000	449,880	526,000	422,210	1,016,000	872,090	(143,910)
3	Other Water Revenue	1,025,000	946,290	1,185,000	875,830	2,210,000	1,822,120	(387,880)
	Grand Total	**11,330,000**	**9,432,289**	**11,269,000**	**9,771,790**	**22,599,000**	**19,204,079**	**(3,394,921)**

In addition, the Company received a total amount of K5,788,381 as government grant bringing the total income to K24,992,460. As at 31st December 2020, out of the total income of K24,992,460, amounts totalling K24,350,258 had been spent leaving a balance of K642,202.

b. Operational Matters - Comparative Performance in the Water and Sanitation Sector

A review of NWASCO Sector reports in relation to the performance of the Company for the financial years ended 31st December 2019 and 2020 revealed that the Company's ranking was at position ten (10) both in 2019 and 2020 out of the eleven (11) water utility companies in the country.

The non-improvement in ranking was attributed to under performance in operational indicators. In particular, the following were observed:

i. Non-Revenue Water

Non-Revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on un-metered customers' premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network.

However, the Company's NRW was 77% in 2019 and 74% in 2020 resulting in a cumulative loss of K50,245,107. See table 3 below.

Table 3: Non-Revenue Water

No.	Details	2020	2019	Total
1	Total Water Production (m3)	4,100,000	4,800,000	8,900,000
2	Total Water Billed (m3)	1,060,000	1,104,000	2,164,000
3	NRW (m3)	3,040,000	3,696,000	6,736,000
4	NRW %	74%	77%	
5	Benchmark (%)	25%	25%	
	Revenue Loss on NRW (K)	**22,321,152**	**27,923,955**	**50,245,107**

ii. Sanitation Coverage

Sanitation Coverage is the proportion of the urban population with access to sanitation services. A review of the Sanitation Coverage operational indicator revealed that during the period under review, the Company's sanitation cover was 33.9% in 2019 and 36.0% in 2020 which was below the NWASCO benchmark of 80%. See table 4 below.

Table 4: Sanitation Coverage

Year	Benchmark	Actual Sanitation Coverage	Variance
2019	80%	33.90%	46.10%
2020	80%	36.00%	44%

As a result, a substantial number of urban households did not have access to adequate sanitation which may compromise public health.

iii. Water Supply Coverage

Water coverage represents the proportion of the population serviced by domestic connections through individual household connections, kiosks, public stand posts and shared/yard taps. During the period under review, the Company's water supply coverage ratio was 49.9% in 2019 and 50% in 2020 which were below the benchmark of 80% set by NWASCO. See table 5 below.

Table 5: Water Coverage

Year	Benchmark	Actual Water Supply Coverage	Variance
2019	80%	49.90%	-30%
2020	80%	50.00%	-30%

Consequently, a large number of the population in the province did not have access to clean water thereby compromising public health.

iv. Operational and Maintenance Cost Coverage by Collection

Operational and Maintenance Cost Coverage by Collection measures the extent to which the level of revenue collections from water and sanitation charges are able to cover all the operational costs. The calculation does not include income from other fees (penalties, meter charges, surcharges), Government and Co-operating partners. The acceptable benchmark for the sector was at least 100%.

However, the Company's operation and maintenance cost stood at 54% in 2019 and 58% in 2020. The operation and maintenance cost was below the sector standard in both years. See table 6 below.

`

Table 6: Cost Coverage by Collection

Year	Sector Benchmark	Actual Operational + Maintenance Cost Coverage
2019	100 – 150%	54.00%
2020	100 - 150%	58.00%

v. Staff Efficiency Indicator

This measures the output of personnel in relation to various aspects of operations such as billing, connections and personnel costs. The Staff Efficiency indicator compares the number of employees to the number of water connections. For the staff cost in relation to the billing and collection, NWASCO target for the sector was 0.4 (or 40%) or less.

However, during the period under review, the Staff Efficiency indicator for the Company was 133% in 2019 and 115% in 2020 which was above the 40% benchmark set by NWASCO. See table 7 below.

Table 7: Staff Efficiency Indicator

Year	Benchmark	Actual Staff efficiency Indicator
2019	≤40%	133%
2020	≤40%	115%

As a result, staff costs were high in relation to the operations thereby affecting the efficiency of the Company.

vi. Failure to Meet Water Quality Standards

Water quality is important due to the health impact it has on the consumers. The overall compliance for water quality is assessed through sequential three (3) step process namely; confidence level, number of samples tested in relation to the minimum required and number of tests meeting the national drinking water standard.

The benchmark for acceptable water quality set by NWASCO was a score greater or equal to 95% (≥ 95%).

In this regard, water utility companies are required to guarantee their customers an overall compliance of at least 95%.

However, a review of the water quality compliance revealed that while the Company met the benchmark of least 95% in 2019, the company failed to meet the acceptable benchmark of at least 95% in 2020. See table 8 below.

Table 8: Water Quality Compliance

Year	Benchmark	Actual Water Quality Compliance
2019	$\geq$95%	$\geq$95%
2020	$\geq$95%	<95%

c. Procurement Matters – Failure to Follow Procurement Procedures

Public Procurement Regulation No. 38 (2) (a) to (d) of 2011 provides guidelines on the procedures to be followed in the procurement of goods and services when single sourcing which include getting a "No Objection" from the Zambia Public Procurement Authority (ZPPA).

Contrary to the regulation, the Company single sourced the procurement of chlorine costing K122,984 and water tanks costing K33,980 from three (3) suppliers without obtaining a "No Objection" from the ZPPA.

d. Accounting Irregularities

i. Unsupported Payments

Financial Regulation Nos. 45 and 52 require that all payments by cheque or cash for goods, services and works should be supported by cash sale receipts and that vouchers relating to purchases be supported by an official order and the supplier's invoices.

Contrary to the regulations, thirty seven (37) payments in amounts totalling K178,661 were not supported with documents such as cash sale receipts, Local Purchase Orders, and quotations among others.

ii. Failure to Collect Revenue

The Company's Commercial Policy requires that customers to pay the water bills within a period of fourteen (14) days after they have received the bills. A review of records revealed that the Company expected to collect revenue in amounts totalling K9,513,175 from water, sanitation and fixed meter charges.

However, as at 30th September 2021, amounts totalling K6,579,617 had been collected leaving a balance of K2,933,558.

e. Administrative Matters

i. Failure to Secure Properties with Title Deeds

Section 41(4) of the Public Finance Management Act No. 1 of 2018 requires Controlling Officers to ensure that all public properties under their charge are secured with title deeds.

Contrary to the Act, the Company did not secure title deeds for various parcels of land on which infrastructure such as water treatment plants and booster stations valued at K1,378,563 was located.

ii. Failure to Dispose of Motor Vehicle

Section 44 (1) of the Public Finance Management Act No. 1 of 2018 requires the controlling body of a local authority, statutory corporation or state-owned enterprise to establish a disposal committee as and when need arises for the purpose of disposal of unserviceable, obsolete, or surplus stores, equipment or assets.

Contrary to the Act, the Company had not disposed of four (4) motor vehicles which had been non-runners for periods ranging from three (3) to four (4) years.

As at 30th September 2021, the disposal committee had not been constituted and the vehicles had not been disposed of.

iii. Failure to Settle Outstanding Obligations

A review of accounting and other records revealed that as at 31st December 2020, the Company had outstanding obligations in amounts totalling K52,035,341 in respect of statutory obligations, utilities and personal emoluments among others. See table 9 below**.**

Table 9: Outstanding Obligations

No.	Debt Category	Principal K	Interest K	Total K
1	**Statutory Obligations**			
	ZRA	7,539,114	5,134,530	12,673,644
	NAPSA	2,935,223	22,353,531	25,288,754
	Workers Compesation	354,415		354,415
	ZEMA	649,995		649,995
2	**Trade Payables**			
	ZESCO	4,057,818		4,057,818
	NWACO	90,579		90,579
	WARMA	15,183		15,183
3	**Office Rentals**			
	Cavmont - Mansa Office Rentals	142,000		142,000
4	**Personal Emoluments**			
	Gratuities	3,693,080		3,693,080
	Leave Days	3,035,854		3,035,854
	Pension	899,852		899,852
	Union	320,057		320,057
	Salary Arrears	419,474		419,474
5	**Other Payables**	394,636		394,636
Total		**24,547,280**	**27,488,061**	**52,035,341**

Consequently, the Company was charged interest in amounts totalling K27,488,061 (ZRA – K5,134,530 and NAPSA – K22,353,531) which may result in wasteful expenditure.

f. Failure to Fill Key Vacant Position

A review of the staff establishment for 2020 revealed that the Company had a total establishment of 82 approved positions, out of which 72 were filled leaving ten (10) still vacant. The vacant positions included the position of Technical Manager which was key in the provision of technical support and supervision of projects such as Integrated Small-Town Water Supply and Sanitation Project (ISTWSSP).

As at 30th September 2021, the position had been vacant for twenty (20) months.

10. Lukanga Water Supply and Sanitation Company Limited

10.1 Background

a. Establishment

Lukanga Water Supply and Sanitation Company Limited (LgWSSC) was established under Section 9 (c) Part III of the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation amendment Act No. 10 of 2005.

The Company was incorporated as a private company limited by shares under the Companies Act Cap 388 of the Laws of Zambia in 1999 and commenced its operations in 2007. The Company's shareholding is as shown in table 1 below.

Table 1: Shareholding %

No.	Shareholders	Shareholding %
1	Kabwe Municipal Council	41.02
2	Kapiri Mposhi Town Council	19.59
3	Serenje Town Council	13.29
4	Mkushi Town Council	11.91
5	Mumbwa Town Council	7.14
6	Chibombo Town Council	3.21
7	Chisamba Town Council	3.06
8	Ithezhi-Tezhi Town Council	0.58
9	Chitambo Town Council	0.10
10	Luano Town Council	0.05
11	Ngabwe Town Council	0.05
	Total	**100**

b. Governance Structure

The Company is governed by a Board of Directors comprising ten (10) members as detailed below:

i. a Mayor or Chairperson from one of the participating Councils;
ii. a Town Clerk or Council Secretary from one of the participating Councils;
iii. the Provincial Local Government Officer or representative;
iv. a representative from the Engineering Institution of Zambia;
v. two (2) representatives from the private sector;
vi. a commercial consumer category representative
vii. a domestic consumer category representative; and

viii. two (2) members appointed by the Minister, one of whom shall be the Chairperson of the Board.

The Board members hold office for a term of three (3) years and are eligible for reappointment upon expiry of their term of office but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the Company and is assisted by one (1) Director responsible for Engineering and five (5) managers responsible for Technical Services, Finance, Commercial and Business Development, Public Relations and Human Resource and Administration.

d. Sources of Funds

The sources of funds for the Company include, such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The Company also receives grants from the Government and Co-operating Partners.

10.2 Audit Findings

An examination of financial and other records maintained at Lukanga Water Supply and Sanitation Company Limited for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services, connection charges in amounts totalling K121,143,287 against a budget of K133,072,064 resulting in an negative variance of K11,928,777 as shown in table 2 below.

Table 2: Budget and Income

No.	Source of Funds	2020		2019		Total Budget	Total Income	Variance
		Budget K	Income K	Budget K	Income K	K	K	K
1	Water Charges and Sanitation	62,135,276	63,135,705	61,581,503	53,310,339	123,716,779	116,446,044	7,270,735
2	Other Water Revenue	5,061,993	2,414,149	4,293,292	2,283,094	9,355,285	4,697,243	4,658,042
	Total Revenue	**67,197,269**	**65,549,854**	**65,874,795**	**55,593,433**	**133,072,064**	**121,143,287**	**11,928,777**

In addition, the Company received a total amount of K2,520,025 Capital (K1,720,025) and Revenue (K800,000 - impact of COVID -19) grants from Government bringing the total income to K123,663,312. As at 31st December 2020, out of the total income of K123,663,312 amounts totalling K119,806,849 had been spent leaving a balance of K3,856,463.

b. Corporate Governance

i. Unfilled Board Vacancy

The Board of Directors was appointed in October 2018 and consisted of nine (9) members appointed by the shareholders. However, it was observed that the Company had operated without the required number of ten (10) members during the period under review contrary to the Articles of Association of the Company.

Further, there was no representation from the Councils in the form of a Mayor/ Chairman from any of the participating Councils contrary to Section 62 (1) (a) of the Articles of Association.

ii. Excess Expenditure on Board Expenses

According to good corporate governance practices, the Board provides oversight and policy direction on the operations and finances of the Company. The Board control and administer the company in accordance with sound business practice and in the best interest of the shareholders. One of the policy documents that helps the Board oversee the operations of the Company is the annual budget, which provides ceiling on management expenditures.

It was however, observed that during the period under review, the Company incurred cumulative board expenses in amounts totalling K1,141,629 against the budget of K1,065,000 resulting in excess expenditure of K76,629. See table 3 below.

Table 3: Board Expenses

No.	Details	2019 K	2020 K	Total K
1	Budgted	565,000	500,000	1,065,000
2	Actual	463,084	678,545	1,141,629
	Variance	**101,916**	**(178,545)**	**(76,629)**

c. Management of Information and Communication Technology Systems

i. Lack of an Information Technology (IT) Steering Committee

CoBIT2019 PO4.3 provides for the establishment of an IT Steering Committee and that an IT Steering Committee (or equivalent) composed of executive, business and IT management should inter alia, be responsible for:

- aligning, planning and organizing alignment goals and initiatives as indicated by the Board’s strategic direction and vision for business and IT;
- building, acquiring and implementing needed infrastructure, applications and services.
- running and maintaining the established business services; and
- monitoring, evaluating, and assessing the performance and compliance of all the IT related processes, practices and activities.

The Company acquired and implemented ICT systems such as Pastel Partner, Dove Payroll, LgWSC Digital Meter System (LDMR), Promun Billing Systems, and prepaid billing system during the period under review without constituting a Steering Committee to oversee the projects.

ii. Poor Physical and Environmental Security

CoBIT DSS01.04-2019 Manage the Environment, stipulates that an entity should install specialized equipment, monitor and maintain devices that proactively detect environmental factors in line with laws and regulations, technical and business requirements, vendor specification and health and safety guidelines and keep the ICT sites and server room clean and in a safe condition at all times. The following were noted with regard the environment where the servers were installed:

- **Lack of Operational Fire Detection System**

  Fire detection systems are designed to detect fire and plays a significant role in protecting the safety of personnel and property in case of fire. Fire detection system also help to minimise downtime for the operation because control efforts are initiated early by personnel and thus help manage the fire before it becomes uncontrollable. The Company had a fire detection system at its Headquarters in Kabwe which was designed to mitigate the risk of fires at the premises.

However, a physical inspection conducted at the Company premises in July 2021 revealed that the fire detecting system was not operational. Inquiries with management revealed that the system had not been functioning since 2010 and was therefore incapable of providing early warnings in case of fire breaking out at the premises.

- **Lack of Risk Management Policy**

The Company did not have a risk management policy in place. As a result, no formal risk assessments had been carried out by the Company during the period under review.

As at 30th September 2021, the position had not changed.

d. Operational Matters

i. Comparative Performance in the Water and Sanitation Sector

A review of the NWASCO sector reports in relation to the performance of the Company for the years 2019 and 2020 revealed that the Company's ranking improved from position nine (9) in 2019 to three (3) in 2020 out of the eleven (11) water utility companies in the Country. However, the following were observed:

- **Non - Revenue Water (NRW)**

Non-Revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on un-metered customers' premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network.

However, the Company's NRW was 52% in 2019 and 48% in 2020 which resulted in a cumulative loss of K115,393,137. See table 4 below.

Table 4: Non - Revenue Water

No.	Year	2019	2020	Totals
1	Water Production(m3)	13,214,102	12,881,498	26,095,600
2	Billed Volume(m3)	6,288,613	6,654,263	12,942,876
3	NRW Volume(m3)	6,925,489	6,227,235	13,152,724
4	NRW	52%	48%	
5	Average tarrif per Unit K/m3	8.03	9.60	
	NRW(K)	**55,611,680**	**59,781,457**	**115,393,137**

The NRW deprived the Company of the revenue to help improve its operations during the period under review.

- **Metering Ratio**

Metering ratio is the proportion of the metered connections compared to the total connections. It is an important tool with regards to controlling non-revenue water. The acceptable benchmark for metering ratio was 100%. However, during the period under review, the Company only managed to attain 82% in 2019 and 85% in 2020. See table 5 below.

Table 5: Metering Ratio

Year	Benchmark (%)	Metering Ratio (%)	Variance (%)
2019	100%	82%	18%
2020	100%	85%	15%

Failure to meter all the customers resulted in revenue loss.

- **Staff Efficiency Indicator**

This measures the output of personnel in relation to various aspects of operations such as billing, connections and personnel costs. The Staff Efficiency indicator compares the number of employees to the number of water connections. For the number of staff in relation to water connections, NWASCO target for the sector was 8 members of staff per 1000 water connections.

However, during the period under review, the Staff Efficiency indicator for the Company was 46% in 2019 and 52% in 2020 which was above the 40% standard set by NWASCO. See table 6 below.

Table 6: Staff Efficiency Indicator

Year	Benchmark	Actual Staff efficiency Indicator
2019	$\leq$40%	46%
2020	$\leq$40%	52%

As a result, staff costs were high in relation to the operations thereby affecting the efficiency of the Company.

ii. Irregularities in the Promun Billing System

A review of the customer data on the Promun Billing System revealed the following weaknesses:

- **Lack of Requisite Customer Details**

The Company's Commercial Procedure Manual requires that prior to opening a water account, a customer should among others, provide details of full names, plot number, street name, location and purpose for which water is required (i.e., Domestic, Commercial, Industrial, etc.).

Contrary to the manual, there were 3,662 customers out of 29,655 on the database who had incomplete records on the system as they lacked details such as of physical addresses, customer name, customer mobile numbers (SMS alerts) and ID (for individual customers). See table 7 below.

Table 7: Missing Information in the System

No.	Missing Details	No. of Customers
1	House/Plot Numbers	3,024
2	Incomplete Customer Names	597
3	Invalid/Incomplete customer Numbers	41
	Total	**3,662**

Consequently, the lack of phone numbers resulted in the failure by the Company to send alert messages and reminders to the customers using the Promun Billing System which was currently being used at the Company for communicating monthly bills.

- **Customers with Duplicate Meter Numbers**

According to the Company's Commercial Policy, each customer account opened should be assigned a unique customer account number and meter/serial number to ensure that the accounts are distinguished from those already created in the system.

A review of the customer master database revealed that 2,139 customers shared 1,166 meter numbers.

As at 30th September 2021, the correct outstanding amount on the duplicate meter numbers could not be ascertained.

e. Accounting Irregularities

i. Failure to Prepare Audited Financial Statements

Companies Act Chapter 388 Section 164 provides that the directors of a company should prepare or cause to be prepared audited Financial Statements within three (3) months after the end of each financial year.

Contrary to the Act, the Company had not prepared financial statements for the financial year ended 31st December 2020.

As at 31st October 2021, the position had not changed.

ii. Non-Remittance of Statutory Obligations

Income Tax Act Chapter 323 of the Laws of Zambia requires that Pay As You Earn (PAYE) be deducted from officers' emoluments and be remitted to the Zambia Revenue Authority (ZRA).

Section 15(1) of the National Pensions Scheme Act of 1996 requires that a contributing employer should pay to a contribution to the Authority at end of each month and such employer should submit, with such payment, all prescribed supporting particulars concerning his identity, period of employment and earnings to whom the contributions relate.

Contrary to the Acts, amounts totalling K29,579,562 in respect of PAYE (K25,851,259) and NAPSA (K3,728,303) deducted during the period under review had not been remitted to ZRA and NAPSA respectively as at 30th September 2021.

The failure to remit tax resulted in the Company being charged penalties in amounts totalling K40,800.

iii. Failure to Claim Compensation for Insured Computers

A review of IT assets and equipment and insurance documents revealed that on 16th July 2020, two (2) desktop computers and one laptop valued at K32,403 were reportedly stolen from Mumbwa Office. At the time the items were stolen, the assets were comprehensively insured with African Pride Insurance Company.

Further, from 17th July to 20th July 2020, the Company procured two (2) desktop computers and one laptop costing K38,338 from Reliance Technology Limited as replacement for the stolen items instead of claiming for compensation.

As at 30th September 2021, the Company had not claimed compensation from the insurance company.

f. Management of Payroll and Staff Related Matters

i. Irregular Payment of Housing Allowances

Part 37 of the Collective Agreement between Lukanga Water Supply and Sanitation Company and Zambia Water and Sanitation Engineering and Allied Workers' Union (ZWSEAWU) stipulated that employees were entitled to fifteen (15%) percent of their basic pay as housing allowance on a monthly basis. The allowance was not applicable to employees accommodated by the Company.

Contrary to the agreement, amounts totalling K23,870 were paid as housing allowances to two (2) employees who were accommodated in institutional houses. See table 8 below.

Table 8: Payment of Housing Allowances

Year	No. of Officers	Amount K
2019	1	6,974
2020	2	16,896
	Total	**23,870**

As at 30th September 2021, no recoveries had been made.

ii. Overpayment of Terminal Benefits

A review of employee separatees personal files revealed that, two (2) employees were over paid their terminal benefits in amounts totalling K137,815. See table 9 below.

Table 9: Overpayment of Terminal Benefits

No.	Name	Employment Type	Position	Terminal Benefits Paid K	Terminal Benefits Due K	Overpayment K
1	Employee A	Contract	Managing Director	591,263	466,423	124,840
2	Employee B	Full Time	Sanitary Attendant	140,848	127,873	12,975
Grand Total				**732,112**	**594,296**	**137,815**

As at 31st October 2021 no recoveries have been made.

iii. Non Remittance of Contributions - National Health Insurance Scheme

National Health Insurance Act No. 2. of 2018 sub-section (2) states "the employer shall pay contributions to the Scheme at the end of each month".

During the period under review, the Company deducted contributions from employees' emoluments in amounts totalling K166,074 for the period from August to December 2020.

Contrary to Act, the Company had not been remitted the funds to the National Health Insurance Scheme as at 30th September 2021.

g. Poor Management of the Water Treatment Plants – Mine Area

The Water Treatment Plant is located within the premises of the closed Broken Hill Mine supplies water to Chowa Township, Mine area, Mine hospital, Mutwe Wa Nsofu township and Luangwa residential areas. A physical inspection of the Mine Water Treatment Plant conducted in September 2021, however, revealed the following:

i. the water reservoirs are within the mine area and it was observed that the ponds or water reservoirs were not covered thereby exposing the water to solid particles and other foreign debris; and

ii. the wall of the drain out drainage of the ponds collapsed resulting in water being stagnant which has since caused algae formation hence compromising water hygiene. See pictures below.

Uncovered water ponds

Water Pond with algae formation

Blocked drainages

h. Lukanga Water Sanitation Surcharge Projects

In 2007, NWASCO introduced a sanitation surcharge to assist it improve and extend sanitation services to its clients. In this regard, an assessed rate of between 2.5% to 5% of monthly water bill was introduced for every customer apart from those serviced by public water points such as water kiosks.

In this regard, during the period from 2015 to 2020, the Company collected a total of K4,125,760 as surcharge fees against which K1,618,890 was spent leaving a balance of K2,506,870 as at 31st December 2020. See 10 table below.

Table 10: Sanitation Surcharge Collections and Expenditure

Year	Details	Annula Collections K	Annual Expenditure K	Balance K	Progress Area and Scope
2015	Year of Introduction-Sanitation Surcharge	190,000	-	190,000	Yet to Embark on Projects
2016	Sanitation Surcharge	490,000	230,000	260,000	• Chisamba sanitation project to connect 98 customers. • Kapiri Mposhi to connect 250 customers.
2017	Sanitation Surcharge	717,881	132,304	585,577	Laying of sewer network in Kapiri Mposhi to connect 250 customers.
2018	Sanitation Surcharge	828,979	171,346	657,633	Network rehabilitation in Chisamba and 157 connections made
2019	Sanitation Surcharge	1,004,573	190,912	813,661	Mutwewansofu sanitation project in Kabwe
2020	Sanitation Surcharge	894,327	894,327	-	Nil
	Total	**4,125,760**	**1,618,890**	**2,506,870**	

However, despite the availability of funds, the Company had not rehabilitated critical infrastructure such as Mutwe Wa Nsofu Sanitation Network in Kabwe and TAZARA Treatment Plant in Kapiri Mposhi.

In particular, the following were observed:

i. Failure to Rehabilitate TAZARA Treatment Plant - Kapiri Mposhi

TAZARA Treatment Plant was scheduled for rehabilitation effective April 2016 to February 2019 at an estimated cost of K381,193 using sanitation surcharge funds. The scope of works included:

- site clearance and pipework rehabilitations;
- rehabilitation of manholes and concrete structures; and
- fencing of the treatment plant.

The Environmental Management (Licensing) Regulations of 2013 Section 9 (3b) issued under statutory instrument No. 112 of 2013 requires that an owner or operator of an effluent generating entity must ensure that the control, treatment and monitoring facilities are properly maintained and kept in constant state of repair.

A physical inspection of the treatment plant conducted in August 2021, however revealed that no rehabilitation works had been done on the plant. In this regard, raw (untreated) sewer was being discharged in the environment through leakages from dilapidated components of the plant. See pictures below.


Dilapidated Sediment Tanks with Non-Functional Filters

ii. Mutwe Wa Nsofu Sanitation Project-Kabwe District

According to the work plan and budget and progress reports, Lukanga Water and Sanitation Company planned to rehabilitate Mutwe Wa Nsofu Sanitation Network effective April 2016 to February 2019 at an estimated cost of K1,323,274. The project was to be financed through ring fenced sanitation surcharge fund.

The scope of works included the following, among others:

- site clearance and pipework rehabilitations; and
- rehabilitation of manholes, ponds and septic tanks.

However, physical inspection of the project revealed that no rehabilitation works had been done as at 30th September 2021, sixty four (64) months after the expected date of commencement in April 2016. See pictures below.

Dilapidated septic tank

Dried-up sewer pond

11. Lusaka Water Supply and Sanitation Company Limited

11.1 Background

a. Establishment

The Lusaka Water Supply and Sanitation Company (LWSSC) was incorporated in 1988 as a private company limited by shares under the Companies Act Chapter 388 of the Laws of Zambia and the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation Act No. 10 of 2005.

The Company commenced its operations in 1990 with a mandate to provide water and sanitation services to customers in Lusaka Province. The Company's shareholding is as shown in table 1 below.

Table 1: Shareholding %

No.	Shareholders	Shareholding %
1	Lusaka City Council	41.5%
2	Kafue Town Council	16.0%
3	Chongwe Municipal Council	8.5%
4	Luangwa Town Council	8.5%
5	Chirundu Town Council	8.5%
6	Chilanga Town Council	8.5%
7	Rufunsa Town Council	8.5%
	TOTAL	**100%**

b. Governance – Board of Directors

The Company is governed by a Board of Directors comprising eleven (11) members as detailed below:

i. A Mayor or Council Chairperson from participating councils;

ii. A Town Clerk or Council Secretary from participating councils;

iii. A representative from the Law Association of Zambia (ECZ);

iv. A representative from the Engineering Institute of Zambia (ECZ);

v. A representative from the Ministry of Water Development, Sanitation and environmental Protection;

vi. A representative from the Zambia Institute of Chartered Accountants;

vii. The Executive Director of the Zambia Competition and Consumer Protection Commission representing the Consumer Category;

viii. A representative from the Zambia Institute of Human Resources;

ix. The Director Internal Debt Management representing the Ministry of Finance; and

x. The Managing Director of the Company appointed by the Board of Directors.

The board members of the Company hold office for a term of not more than three (3) years and members are eligible for reappointment upon expiry of their term of office but cannot serve for more than two (2) terms.

c. Management

The Company is headed by a Managing Director who is responsible for the day-to-day operations of the Company. He is assisted by five (5) Directors responsible for Finance, Commercial Services, Human Resource Management, Operations, Infrastructure and Planning and Legal Counsel/ Company Secretary and Manager Corporate Planning.

d. Sources of Funds

The sources of funds for the Company include, among others, such sums of money as may be raised from its daily operations of sale of water, provision of sewerage services and income generated from various penalties and administrative charges. Other sources may include funding from the Government of the Republic of Zambia and Cooperating Partners.

e. Information and Communication Technology Systems

During the period under review, Lusaka Water Supply and Sanitation Company (LWSSC) operated four (4) ICT systems namely;

i. EDAMS System - used for revenue collection, billing, fault management and maintenance. The system is used to administer post-paid meters.

ii. Transact System **-** used to administer pre-paid meters.

iii. Dove Payroll **-** used in the administration and processing of general and senior management payroll.

iv. SAGE 300 ERP **-** used for enterprise-wide resource management, asset management, purchase requisition and accounting.

11.2 Audit Findings

An examination of financial and other records maintained at LWSSC for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period under review, the Company generated income in amounts totalling K706,619,517 against the budget of K807,732,266 resulting in a negative variance of K101,112,749. See table 2 below.

Table 2: Budget and Income

No.	Source of Funds	2020		2019		TOTAL		
		Budget K	Income K	Budget K	Income K	Budget K	Income K	Variance K
1	Water and Sanitation Services	431,635,088	341,038,819	339,730,633	348,221,108	771,365,721	689,259,927	(82,105,794)
2	Other Water Revenue	13,562,441	6,819,172	22,804,104	10,540,418	36,366,545	17,359,590	(19,006,955)
	Total	**445,197,529**	**347,857,991**	**362,534,737**	**358,761,526**	**807,732,266**	**706,619,517**	(101,112,749)

In addition the Company received Government grants in amounts totalling K96,519,415 bringing the total income to K803,138,932.

b. Management of Information and Communication Technology Systems

i. Missing Customers (Deleted Customer Key)

According to LWSSC procedures, customers are created on the system upon an application being tendered and approved. Each created customer will have a unique customer key which is sequentially generated on the system. A review of the customer master revealed that 4,958,198 customer key numbers were missing.

Further, a comparison of the missing customer keys to the transaction details revealed that 173 customers had existed and transacted. As at 30th September 2021, amounts totalling K44,056 were outstanding on eleven (11) customers who had deleted customer numbers. It was however not clear why the company had deleted accounts for customers who had transacted and had amounts outstanding.

ii. Missing Customer Name

According to the application for water and/sewerage connection, a customer is required to provide the following among other information; name, contact details, plot number, premise type, street name and area as Know Your Customer (KYC).

A review of the customer master database revealed 620 multiple owned properties had no details on owner name to which the properties were attached.

iii. Customers with Zero Bills

The Company generates revenue based on the customers connected to its water utility network and onetime customers for bulk consumptions and other services. All customers consuming the services of the Company on the properties connected to the water utility network are invoiced.

During the period under review, 2,267 customers were not billed for more than a year resulting in financial loss whose amount could not be ascertained.

iv. Properties not Defined with Connection Details

According to the Company procedures, once the customer is created and approved, connection details and specifications are defined which are key in determining the status of service a customer consumes.

During the period under review, the Company had 29,952 properties created and approved but with no connection details. Included in the 29,952 properties were 1,587 properties that had consumed services. In this regard, it was not clear how the Company had determined the tariff charge to apply on them when the properties had no connection details.

Further of the 1,587 properties, 47 had not being billed despite the properties having consumed various services.

c. Financial Analysis

i. Financial Performance - Statement of Comprehensive Income

Statements of Comprehensive Income for the Financial Years ended 31st December 2019 and 2020 are as shown in table 3 below.

Table 3: Statements of Comprehensive Income

Accounting Period	2020 K	2019 K
Revenue	341,038,819	348,221,108
Cost of Sales	(207,432,684)	(139,652,900)
Gross Profit	**133,606,135**	**208,568,208**
Grant Income	66,630,125	29,889,290
Other Operating Income	6,819,172	10,540,418
Administrative expenses	(168,618,379)	(162,726,194)
Other Operating Expenses	(78,792,061)	(49,017,409)
Net Foreign Exchange-(loss)/Profit	(486,051,933)	(112,121,457)
Net Finance costs	(45,422,148)	(28,222,579)
Loss before taxation	**(571,829,089)**	**(103,089,723)**
Income Tax (expense)/Credit	(1,098,164)	(858,424)
Loss for the year	**(572,927,253)**	**(103,948,147)**
Other Comprehensive Income		
Items that will not be reclassified to profit or Loss		
Amortization of Revaluation Reserve	4,976,746	4,976,746
Total Comprehensive loss for the Year	**(567,950,507)**	**(98,971,401)**

Source: LWSSC draft financial statements for the financial years ended 31st December 2019 and 2020

An analysis of the statements of comprehensive income revealed the following:

- **Operational Losses**

  As can be seen from the table above, the Company had reported a loss of K98,971,401 in 2019 which worsened to K567,950,507 in 2020 representing an increase of 451%. This shows that the Company was incurring more expenses compared to the revenue it collected.

- **Increase in the Cost of Sales against Revenue**

  A review of financial statements revealed that the Company's revenue had reduced by K7,182,289 from K348,221,108 in 2019 to K341,038,819 in 2020 representing a 2% reduction. In the same period, the cost of sales had increased by K67,779,784 from K139,652,900 in 2019 to K207,432,684 in 2020 representing a 49% increment. See table 4 below.

Table 4: Cost of Sales against Revenue Collected

Details	2020 K	2019 K	Variance K
Revenue	341,038,819	348,221,108	**(7,182,289)**
Cost of Sales	207,432,684	139,652,900	**67,779,784**

- **Low Gross Profit Margin Ratio**

The Gross Profit Margin ratio measures gross profit as percentage of total revenue. The ratio gives an indication of how much funds will remain to finance other operating expenses such as salaries, rentals, financing and administration costs. Therefore, a higher Gross Profit Margin Ratio is more favourable for the Company.

An analysis of the Gross Profit Margin Ratio for the Company revealed a decreasing gross profit margin ratios. See table 5 below.

Table 5: Gross Profit Margin Ratio

Details	2020 K	2019 K
Revenue	341,038,819	348,221,108
Gross Profit	133,606,135	208,568,208
Gross Profit Margin	**60%**	**61%**

As can be seen from the table above, the Company generated Gross Profit Margins of 61% in 2019 and decreased to 60% for the financial year ending 31st December 2020.This reduction was as a result of incurring high cost of sales which reduced the gross profit of the Company.

- **Inadequate Interest Cover Ratio**

Interest Cover Ratio is the ratio that shows the adequacy of profit generated by the Company to meet its interest obligations on long term loans. The interest coverage ratio is calculated by dividing a company's profits before interest and taxes (PBIT) by the company's interest expenses for the same period. Interest coverage ratio = PBIT / Interest expenses. During the period under review the Company had long term loan obligations as shown in table 6 below.

Table 6: Interest Cover

Details	2020 K	2019 K
Interest Payable	45,422,148	28,222,579
Profit/Loss Before Interest & Tax	(526,406,941)	(74,867,144)
Interest Cover Ratio (ICR)	**(11.6)**	**(2.7)**

An interest coverage ratio below 1.0 indicates that the business is having difficulties generating cash necessary to pay its interest obligations (i.e. interest payments exceed its earnings (PBIT)).

As can be seen from the table above, the Company's Interest Cover Ratio reduced from a negative 2.7 times in 2019 to negative 11.6 which meant that the Company's losses before interest and taxes increased. This showed that the Company was unable to generate earnings or profits to pay its interest obligations.

ii. Statements of Financial Position

The Statements of Financial Position for the financial years ended 31st December 2019 and 2020 were as shown in table 7 below.

Table 7: Statement of Financial Position

	2020 K	2019 K
ASSETS		
Non - current assets		
Property,Plant and Equipment	1,418,635,505	1,049,754,968
Total Current Assets	**1,418,635,505**	**1,049,754,968**
Current assets		
Inventories	11,854,438	10,011,011
Trade and other Receivables	177,548,029	225,390,173
Cash and Bank balances	257,598,599	130,077,605
Non-current Assets	**447,001,066**	**365,478,789**
Total Assets	**1,865,636,571**	**1,415,233,757**
EQUITY AND LIABILITIES		
Equity		
Share Capital	3,000	3,000
Share Premium	1,997,000	1,997,000
Funda Awaiting allotment of shares	95,711,210	95,711,210
Capital Reserves	15,693,034	15,693,034
Revaluation Reserves	49,767,468	54,744,214
Accumulated Loses	-870,066,074	-302,115,567
Deficity in Equity	**-706,894,362**	**-133,967,109**
Non-Current Liabilities		
Deffered grant	1,104,904,492	621,239,403
Capital grant	298,942,167	275,246,405
Interest - bearing Loans and Borrowings	812,632,704	384,083,093
Obligation Under Finance Leases	294,421	2,320,897
Total Non-Current Liabilities	**2,216,773,784**	**1,282,889,798**
Current liabilities		
Defered grant	39,451,713	20,359,952
Bank Overdraft	7,530,450	7,013,823
Interest - bearing Loans and Borrowings	30,697,021	32,324,857
Obligation Under Finance Leases	2,709,799	2,221,948
Capital grant	27,178,412	9,529,337
Employee Benefits	1,883,928	68,276
Trade and other Payables	245,687,062	194,013,379
Income Tax Payables	618,764	779,496
Total Current Liabilities	**355,757,149**	**266,311,068**
Total equity and liabilities	**1,865,636,571**	**1,415,233,757**

Source: LWSSC draft financial statements for the financial years ended 31st December 2019 and 2020

- **Return on Capital Employed (ROCE)**

  Return on Capital Employed (ROCE) is a measure of the returns that a business is achieving from the capital employed, usually expressed in percentage terms. Capital employed equals a company's equity plus non-current liabilities (or Total Assets − Current Liabilities). ROCE indicates the efficiency and profitability of a company's capital investments. During the period under review, the Company's ROCE was as shown in table 8 below.

Table 8: Return on Capital Employed

Details	**2020** **K**	**2019** **K**
Capital and Reserves	(706,894,362)	(133,967,109)
Non-current liabilities	2,216,773,784	1,282,889,798
Total Capital Employed	**1,509,879,422**	**1,148,922,689**
Profit before interst and Tax (PBIT)	(526,406,941)	(74,867,144)
ROCE	**-35%**	**-7%**

As can be seen from the table above, the Company had negative 7% ROCE in 2019 which worsened to negative 35% in 2020. Negative ROCE mean that the company was not efficiently applying its resources to generate any profits. ROCE should always be higher than the rate at which the Company borrows to sustain its operations.

- **Receivable Turnover Ratio**

The receivable turnover ratio measures the number of times on average an entity converts receivables into cash in a year and reveals how active and successful a company is in collecting its outstanding receivables. An analysis of the receivable turnover showed an increase in efficiency at collecting the receivables. See table 9 below.

Table 9: Receivable Turnover Ratio

Details	**2020** **K**	**2019** **K**
Revenue	341,038,819	348,221,108
Trade Receivables (net of Imparement)	169,294,193	218,283,327
Receivable Turnover (times)	2.0	1.6
Receivable Turnover (Days)	181	229
Debt Collection Policy (Days)	30	30

As can be seen from the table above, the receivables turnover ratio for the Company was 1.6 times in the year 2019 and increased to 2.0 times in 2020. Further, the debt collection period had decreased from 229 days recorded in 2019 to 181 days in 2020. However, even though there has been a decrease in the number of days, the debt collection period was over the Company's debt collection period of thirty (30) days. The Company may have difficulties with liquidity due to failure to collect cash.

- **Poor Debt-to-Equity Ratio**

The debt-to-equity ratio (debt/equity ratio) is a financial ratio indicating the relative proportion of the entity's equity and debt used to finance an entity's assets. It is also a measure of a company's ability to repay its obligations. If the ratio is increasing, the company is being financed by creditors rather than from its own financial sources which may be a dangerous trend. Thus, companies with high debt-to-equity ratios may not be able to attract additional lending capital. The optimal debt-to-equity ratio is considered to be about 1:1 to about 1:2. During the period under review, the Company's Debt to Equity Ratio was as shown in table 10 below.

Table 10: Debt-to-Equity Ratio

Details	2020 K	2019 K
Debt (long term borrowings)	812,632,704	384,083,093
Equity (Capital and Reserves)	(706,894,362)	(133,967,109)
Debt/Equity Ratios	**(1)**	**(3)**

As can be seen from the table above, the Company recorded a negative Debt-to-Equity ratio of 1:3 in 2019 which increased to 1:1 in 2020. However, from the recorded negative ratios above, it shows that the Company was depending too much on debt to finance its operations. This can negatively affect the going concern of the Company as it may not attract further investments.

- **Increase in Payables (Creditor) Days**

Creditor day's estimate is the average time it takes an institution to settle its debt obligations. It is a useful indicator when assessing the liquidity position of a company. The Company Management accounting policy states that all purchases must be paid within a period of 30 days. During the period under review, the payables days reduced from 336 days in 2019, to 275 days in 2020.

Even though there was a reduction between 2019 and 2020, the payables days were still very high. See table 11 below.

Table 11: Payable Days

	2020 K	2019 K
Cost of Sales	207,432,684	139,652,900
Trade Payables	156,516,236	128,532,306
Receivable Turnover (days)	**275**	**336**

- **Funds Awaiting Allotment of shares**

  During the period under review, the Company had funds awaiting allotment of shares amounting to K95,711,210. These funds relate to the loans which were obtained by the Government in 1988 for the rehabilitation of the Company's water network which were later written off by ADB due to be converted to equity. However, as at 30th September 2021, the funds had not been allotted into shares.

- **Failure to Carry Out an Impairment Assets Review**

  IAS 36 Impairment of Assets requires that an entity should assess at the end of each reporting period whether there are any indications that an asset may be impaired. If any such indication exists, the entity should estimate the recoverable amount of the asset. Furthermore, the company's Financial Management Policy No.5.3.3.I on Property, Plant and Equipment emphasises on the above standard.

  However, management did not carry out any impairment of assets review on the non-current assets which led to assets being recorded at amounts higher than recoverable amounts which might lead to the overstatement of assets.

- **Failure to Carry out Revaluation on Property, Plant and Equipment**

  The IAS 16 and the financial management Policy No.5.3.3.III on Property, Plant and Equipment requires the assets to be revalued at least once after five (5) years. It also requires that for those assets that experience significant and volatile changes in fair value, revaluation should be conducted annually so that the carrying amount of such an asset does not differ materially from its fair value at the balance sheet date.

  However, contrary to the standard and accounting policy, only the leasehold property (buildings) were revalued in 2010, all other assets were not revalued.

d. Questionable Operation of Medical Schemes

Section 13 (3) of the National Health Insurance Act No. 2 of 2018 requires an employer to register their employees with the National Health Insurance Authority (NHIMA) within thirty days of the commencement date of the contract of employment.

In addition, according to the Statutory Instrument No. 63 of 2019 all employers are required to migrate their staff to the National Health Insurance Scheme (NHIS) under NHIMA.

A scrutiny of the accounting records revealed that Lusaka Water Supply and Sanitation Company was operating another medical scheme despite contributing to the National Health Insurance Scheme (NHIS). Under the other scheme, the Company pays 75% of the medical bills while the employee pays 25%.

In this regard, during the period under review, the Company paid amounts totalling K216,108 in respect medical bills for its employees while amounts totalling K816,884 had been remitted to NHIS.

e. Wasteful Expenditure – Valuation of Assets

On 9th May 2019, the Company engaged Five Star Properties Limited jointly with Keycon Consulting to conduct a complete valuation of all its assets at a contract sum of K1,099,225. The assets to be valued included land and buildings, plant and machinery, water and sewerage networks. The contract duration was three (3) months and was to cover six (6) districts namely; Lusaka, Chongwe, Luangwa, Chilanga, Kafue and Chirundu.

On 2nd November 2020, after several extensions to his contract, the consultant submitted a draft valuation report to management which was incomplete in that key information such as the identification numbers, location coordinates, pictures of assets reflected in the report were missing and inadequate application of the aggregated score.

Consequently, on 29th March, 2021, the Company terminated the contract for failure to fulfil the obligations under the contract by the consultant. As at 31st March 2021, the Consultant had been paid amounts totalling K549,612.

Further, it was observed that the contract document did not provide for the provision of the performance bond (security) by the Consultant.

f. Theft of Company Funds

In January 2019, management under the Kafue Branch reported to the Police theft of funds amounting to K100,629 by an officer based at the branch. The officer was involved in teeming and lading by using cash collections for the next day to make up for the amount which should have been deposited the previous day to cover up fraud which was discovered after he absconded from work.

As at 30th September 2021, thirty three (33) months after reporting the theft the funds had not been recovered and the officer had not been apprehended.

g. Delayed Insurance Claims - Motor Vehicle

On 26th November 2020, a Toyota Hilux registration No. BAC 8712 and a motor bike registration No. BAP 3046 were involved in road traffic accidents. The motor vehicle and motor bike had been comprehensively insured.

It was observed that the repair works had been completed and the total cost was K98,284 (BAC 8712 - K93,554 and BAC 3046 K4,730) out of which the insurance company was supposed to pay K80,853 (BAC 8712 - K76,624 and BAP 3046 – K4,230)

However, as at 30th September 2021, the insurance company had not paid the amount to the garage and the vehicles was still held at the garage.

h. Installation of Water Meters – Lilayi Police Camp

On 14th February 2019, Global Water Resources (Z) Limited donated a total number of 6,263 Baylan meters costing US$415,824 (equivalent of K6,669,813) to LWSSC under the Millennium Project Completion Agency. The meters were supplied in two (2) different categories which comprised post and prepaid meters.

During the period from September 2019 to July 2020, the Company installed 721 prepaid meters in Lilayi Police Camp.

However, a physical inspection conducted on 16th September 2021 at seventy eight (78) houses revealed that five (5) water meters had developed some faults and the customers had illegally connected the water supply by-passing the meters. As at 31st October 2021, only one (1) customer had paid a penalty fee of K1,000 that they were charged by the Company.

Further, another inspection conducted on 8th November 2021 revealed that a customer (B03) had illegally connected water to his premises for the second time. See table 12 below and picture below.

Table 12: Houses with Illegal Connections

No.	Meter Number/ Property number	Challenge
1	1249327 / Hse # B3	Illegal connection and meter removed without authority
2	1248565	Illegal connection
3	1249113	Illegal connection
4	1248481	Illegal connection
5	1248560/A44	Meter vandalised

Pictures of Irregular Connections of Water

12. Mulonga Water Supply and Sanitation Company Limited

12.1 Background

a. Establishment

Mulonga Water Supply and Sanitation Company Limited (MWSSC) was established under Section 9 (c) part III of the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation Amendment Act No. 10 of 2005.

The Company was incorporated as a private company limited by shares under the Companies Act Chapter 388 of the Laws of Zambia in 1999 and commenced its operations in 2000.

MWSSC is owned equally by three (3) Local Authorities namely, Chingola, Chililabombwe and Mufulira Municipal Councils on the Copperbelt Province with the primary business to provide water and sanitation services to customers in the said towns. See table 1 below.

Table 1: Shareholding %

No.	Shareholders	Shareholding (%)
1	Chingola Munincipal Council	33
2	Mufulira Munincipal Council	33
3	Chililabombwe Muncipal Council	33
	Total	**100**

b. Governance Structure

The Company is governed by a Board of Directors comprising ten (10) members as detailed below.

i. a Mayor or Council Chairperson from one of the participating Councils;

ii. a Town Clerk or Council Secretary from one of the participating Councils;

iii. the Provincial Local Government Officer or representative;

iv. a representative from the Engineering Institute of Zambia;

v. two (2) representatives from the private sector;

vi. a commercial consumer category representative;

vii. a domestic consumer category representative; and

viii. two (2) members appointed by the Minister, one of whom shall be the Chairperson of the Board.

The board members hold office for a term of not more than three (3) years and are eligible for reappointment upon expiry of their term of office subject to a review of their performance at every annual general meeting but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the Company and is assisted by four (4) Directors responsible for Finance, Infrastructure Development, Technical and Human Resource and Administration.

d. Sources of Funds

The sources of funds for the Company include such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The Company also receives grants from the Government and Co-operating Partners.

e. Information and Communication Technology Systems

During the period under review, the Company operated three (3) ICT systems as detailed below:

i. Promun Integrated Billing System for billing and receipting;

ii. Pastel for accounting;

iii. Navision System used for financial accounting transactions; and

iv. Dove Payroll used in the processing of management and general payroll.

12.2 Audit Findings

An examination of financial and other records maintained at the headquarters and regional offices for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services and connection charges in amounts totalling K353,941,454 against a budget of K371,153,223 resulting in a negative variance of K17,211,769. See table 2 below.

Table 2: Budget and Income

Source of Funds	2020		2019		Total Budget	Total Income	Variance
	Budget K	Income K	Budget K	Income K	K	K	K
Billings (Water and Sewer Services)	192,421,803	172,661,484	174,971,613	168,685,970	367,393,416	341,347,454	(26,045,962)
Other Income	1,002,000	1,181,727	2,757,807	11,412,273	3,759,807	12,594,000	8,834,193
Total Revenue	**193,423,803**	**173,843,211**	**177,729,420**	**180,098,243**	**371,153,223**	**353,941,454**	**(17,211,769)**

In addition, the Company received a total amount of K47,806,497 as capital grants bringing the total income to K401,747,951. As at 31st December 2020, amounts totalling K358,608,198 had been spent leaving a balance of K43,139,753.

b. Information and Communications Technology (ICT) System

i. Use of Unsupported Operating System

ISO/IEC 27001 requires an organisation to obtain information about technical vulnerabilities of information systems being used timely and the exposure to such vulnerabilities should be evaluated and appropriate measures taken to mitigate the associated risks.

Further, Microsoft Corporation, the proprietor of Microsoft products announced in 2018 that the support services for the windows 7 operating system would expire on 14th January 2020.

However, as at 30th September 2021, the Company had ninety-seven (97) computers running on Windows 7 whose support services had expired in January 2020. The computers were used for billing and repository of previous payroll data. In this regard, the computers were susceptible to malware and virus attacks that could compromise data on the system.

ii. Lack of Control Over Billing System - Promun Progress Database

In 2008, the Company acquired the Promun System at a cost of K132,465 from R Data Pty based in South Africa. The system was used for processing customer billing transactions.

During the period under review, the Company stored its 59,100 customer records such as customer name, contact details, residential address, consumption and billing details on the progress database for which it paid K173,545 annually for licensing on the Promun application and database. ISO/IEC 27001 requires that all information and assets associated with information processing facilities must be owned and protected by a designated part of the organisation.

Contrary to the requirement, the Company had no direct access to the promun progress database in that the database schema and various table structure were only known and managed by the vendor. This exposed the promun system to unauthorised changes or modification at the database structure.

iii. Weaknesses in the Billing System

Best practices require an application to be versatile so as to operate with various systems. This would enable an organisation to make seamless exchange of information between various systems. However, it was observed that the billing system was not configured to support any interface with any external system. In particular, the following were observed:

- **Unreconciled Invoiced Amounts**

  A comparison between invoiced amounts in the billing and accounting systems revealed that the accounting system showed an amount of K221,685,426 while the consolidated billing from the Promun billing system showed a total of K220,986,387 resulting in discrepancy of K699,039 as shown in table 3 below.

Table 3: Unreconciled Invoiced Amounts

Year	Pastel Amount K	Non Mine Revenue -Promun System Revenue K	Difference Amount K
2019	108,554,440	108,407,239	147,201
2020	113,130,986	112,579,148	551,838
Total	**221,685,426**	**220,986,387**	**699,039**

As at 30th September 2021, the differences had not been reconciled.

- **Adjustment without Supporting Documentation**

  Commercial Services Policy No. 21.17 on authorisation threshold for financial adjustments, the Customer Service Officer (CSO) raises the appropriate adjustment, attaches the necessary documents and gives the divisional manager for approval. The adjustment form is then passed to Finance Manager for authorisation.

  During the period under review, the Company had passed adjustments (credit notes) on twenty-two (22) accounts to reduce the amounts outstanding from K246,405 in

2019 to K154,060 in 2020 without supporting documentation such as meter reading reports and adjustment forms.

- **Missing Information on Client Master - Customers without Contact Details**

  Commercial Services Policy Section 21.1 of the Company on new water connections requires a customer to complete an application form "A" which also formed part of the Company Know Your Customer (KYC). Contained in the form are customer details such as applicants name, contact details, plot number, premise type, street name and area.

  However, it was observed that there were 6,157 customers out of 59,100 on the database who had incomplete records on the system as they lacked contact details such as house numbers, phone numbers and customer names. This resulted in the failure by the Company to track the customers using the Bulk Messaging System (BMS) which was currently being used to communicate monthly bills to customers.

  In this regard, as at 30th September 2021, the Company was owed a total amount of K77,785,707 by the customers. See table 4 below.

Table 4: Customers without Contact Details

No.	Description	No. of Accounts	Amount K
1	Accounts without customer names	1,441	1,327,498
2	Accounts without contact numbers	4,716	76,458,209
	Total	**6,157**	**77,785,707**

iv. Unaccounted for Revenue

The Company collects revenue from billings using both collection points located in various places and direct debits from customers. In order to facilitate the collection processes, the Company allocated computers to various collection points. A review of records and the computer user report from the system revealed that a total amount of K2,226,565 collected from six (6) computers in various points during the period from March 2018 to August 2021 were not accounted for in that there was no evidence that the funds were banked.

As at 30th September 2021, the funds had not been accounted for and no action had been taken.

v. Failure to Collect Debt

A review of the debtors' ledger revealed that the Company was owed amounts totalling K290,491,976 as at 30th December 2020. See table 5 below.

Table 5: Uncollected Debt

No.	Customer Category	Year		Category %	% Increase	Rate of Default %
		2020	2019			
1	Domestic and Commercial	203,348,355	176,920,173	70.00%	0.15	69.23
2	Mine Operaters	33,904,263	13,552,747	11.67%	1.50	9.43
3	GRZ	53,239,358	45,663,481	18.33%	0.17	32.99
	Total	**290,491,976.00**	**236,136,401.00**		**0.23**	

c. Operational Matters

i. Comparative Performance in the Water and Sanitation Sector

A review of the National Water and Sanitation Council (NWASCO) sector reports in relation to the performance of Mulonga Water Supply and Sanitation Company for the years 2019 and 2020 revealed that the Company's ranking dropped from position two (2) in 2019 to eight (8) in 2020 out of the eleven (11) water utility companies in the country. The drop-in ranking was attributed to under performance in operational indicators. In particular, the following were observed:

- **Non-Revenue Water**

  Non-Revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on unmetered customers' premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network. However, the Company's NRW was 38% in 2019 and 43% in 2020 which resulted in a cumulative loss of K390,313,200. See table 6 below.

Table 6: Non-Revenue Water

No.	Details	2020	2019	Total
1	Total water production (m3)	44,900,000	51,300,000	96,200,000
2	Total water billed (m3)	19,307,000	19,494,000	38,801,000
3	NRW (m3)	25,593,000	31,806,000	57,399,000
4	NRW (%)	43%	38%	
5	Benchmark (%)	25%	25%	
	Revenue Loss on NRW (K)	**174,032,400**	**216,280,800**	**390,313,200**

The NRW above the bench mark deprived the Company of the revenue to help improve its operations during the period under review.

- **Failure to Meet Water Quality Standards**

Water quality is important due to the health impact it has on the consumers. The overall compliance for water quality is assessed through sequential three (3) step process namely; confidence level, number of samples tested in relation to the minimum required and number of tests meeting the national drinking water standard.

The benchmark for acceptable water quality set by NWASCO was a score greater or equal to 95% (≥ 95%). In this regard, water utility companies are required to guarantee their customers an overall compliance of at least 95%.

However, a review of the water quality compliance revealed that the Company did not meet the acceptable benchmark of at least 95% during the period under review. See table 7 below.

Table 7: Water Quality Compliance

Year	Benchmark	Actual Water Quality Compliance
2019	≥95%	<95%
2020	≥95%	<95%

- **Operation and Maintenance Cost Coverage by Collection**

This measures the extent to which the level of revenue collections from water and sanitation charges are able to cover all the operational costs. The calculation does not include income from other fees (penalties, meter charges, surcharges), Government and Co-operating partners. The acceptable benchmark for the sector was at least 100%. However, the Company operation and maintenance cost stood at 101% in 2019 which was within the sector standard but dropped to 87% in 2020 which was below the sector standard. See table 8 below.

Table 8: Cost Coverage by Collection

Year	Sector Benchmark	Actual Operation and Maintenance Cost Coverage
2019	100-150%	101%
2020	100-150%	87%

It was further observed that the 87% recorded in 2020 was below the sector average of 96%.

- **Metering Ratio**

Metering ratio is the proportion of the metered connections compared to the total connections. It is an important tool with regards to controlling non-revenue water. The acceptable benchmark for metering ratio was 100%. However, during the period under review the Company only managed to attain 86% in 2019 and 88% in 2020. See table 9 below.

Table 9: Metering Ratio

No.	Year	Benchmark (%)	Metering Ratio(%)	Variance (%)
1	2019	100%	86%	14%
2	2020	100%	88%	12%

Failure to meter all the customers resulted in revenue loss to the Company.

- **Staff Efficiency Indicator**

This measures the output of personnel in relation to various aspects of operations such as billing, connections and personnel costs. The Staff Efficiency indicator compares the number of employees to the number of water connections. For the staff cost in relation to the billing and collection, NWASCO target for the sector was 0.4 (or 40%) or less. However, during the period under review, the Staff Efficiency indicator for the Company was 46% in 2019 and 52% in 2020 which was above the 40% standard set by NWASCO. See table 10 below.

Table 10: Staff Efficiency Indicator

Year	Benchmark	Actual Staff efficiency Indicator
2019	≤40%	46%
2020	≤40%	52%

As a result, staff costs were high in relation to the operations thereby affecting the efficiency of the Company.

ii. Customers with Questionable Negative Balances

There were sixty-five (65) customers with running negative balances in amounts totalling K1,124,657. However, a scrutiny of records revealed that no over-payments had been made on their respective accounts. Consequently, services costing K53,444 consumed by the sixty-five (65) customers during the period under review had not been paid for as at 30th September 2021.

d. Accounting Irregularities

i. Unsupported Payments

Financial Regulation Nos. 45 and 52 require that all payments by cheque or cash for goods, services and works should be supported by cash sale receipts and that vouchers relating to purchases be supported by an official order and the supplier's invoices.

Contrary to the regulations, twenty (20) payments in amounts totalling K504,076 were not supported with documentation such as receipts, quotation and activity reports.

ii. Irregular Issuance of Imprest

Ministry of Finance Treasury and Financial Circular No.1 of 2020 guided Controlling Officers that no cash should be withdrawn for payment of subsistence allowances, fuel refunds and any other allowances as these should be paid directly into the beneficiary's account. Further, Financial Regulation 86(c) states that accountable imprest is imprest that is issued to facilitate the purchase of goods and services whose value cannot be ascertained at the time. Contrary to the circular and regulation, it was observed that:

- **Allowances and Personal Related Payments**
  Imprest in amounts totalling K306,526 was issued to two (2) officers to facilitate payments of allowances to several officers instead of paying directly into the beneficiaries account.
- **Procurement of Goods and Services**
  Accountable imprest in amounts totalling K298,868 was issued to two (2) officers to procure goods and services whose values were readily obtainable and available on the markets.

iii. Unaccounted for Stores

Public Stores Regulation No. 16 requires that every stores officer or any other officer having in his charge any public stores or other articles of public property must keep and maintain record of receipt and issue of such public stores. Contrary to the regulation, various items costing K3,945,974 were unaccounted for in that they lacked disposal details.

iv. Failure to Deduct Tax on Board Allowances

The Income Tax Act Chapter 323 of Laws of Zambia requires that Pay As You Earn (PAYE) be deducted from officers' emoluments and be remitted to the Zambia Revenue Authority (ZRA). Contrary to the Act, amounts totalling K648,160 were paid as board allowances to ten (10) board members during the period under review without deducting Pay As You Earn (PAYE) in amounts totalling K243,060.

Further, it was observed that on 10th September 2021, amounts totalling K243,060 were paid to ZRA as PAYE by the Company on behalf of board members resulting in wasteful expenditure. As at 30th September, 2021, the K243,060 had not been recovered from the members.

e. Administrative Matters

i. Management of Liabilities – Outstanding Bills

The Company had accrued debts in amounts totalling K69,763,438 in respect of PAYE, supplier bills such as ZESCO, Zamtel, Chemical and Engineering Supplies as at 31st December 2020.

ii. Wasteful Expenditure

- **Payment of Penalty fee**

  On 28th August 2019, the Company paid an amount of K164,701 to the National Pensions Scheme Authority (NAPSA) as penalty for unpaid NAPSA contributions totalling K809,955. However, the expenditure was wasteful in that the penalties arose as a result of the Company's failure to settle the bills on time.

- **Litigation Costs**

  During the period under review, the Company had various litigation cases. A review of files and respective court rulings revealed that the Company spent amounts totalling K1,827,646 in respect of legal fees and costs. In particular, the following were observed:

- **Kenny Mukosha and 3,560 Others Vs Mulonga Water Supply and Sanitation Company**

  In 2012, the Company was sued in the High Court by Mr Kenny Mukosha and 3,560 others of Mupambe Township in Mufulira District for negligence. Facts of the matter were that the township experienced an outbreak of typhoid and the source of the outbreak was, according to the claim, attributed to a broken sewer pipe.

  Consequently, on 24th April 2020, judgement was entered against the Company which was ordered to pay amounts totalling K1,459,385 in respect of damages, legal fees and interest costs. See table 11 below.

Table 11: Damages and Legal Costs

No.	Details	Amount K
1	Damages	633,000
2	Interest	326,385
3	Legal Costs	500,000
	Total	**1,459,385**

  As at 30th September 2021, amounts totalling K1,159,385 had been paid as legal fees leaving a balance K300,000. The payment was wasteful as it could have been avoided had the Company maintained its sewer line.

- **Elijah Mwale Vs Mulonga Water Supply and Sanitation Company**

  In 2018, Mr Elijah Mwale a former employee sued the Company for unlawful dismissal. According to his claim filed in the Industrial Relations Court, Mr Mwale claimed for K250,359. On 13th February 2020, the case was ruled in favour of the plaintiff and the Court ordered the Company to pay amounts totalling K250,359 in respect of damages and the whole amount had been paid by the Company.

  The payment was wasteful as it could have been avoided had the Company followed the procedures.

- **Chirock Investments Ltd Vs Mulonga Water Supply and Sanitation Company**

  On 24th January 2020, Chirock Investments Ltd sued the Company for non-payment of outstanding amount of K87,902 owed for the supply of goods. On 18th June 2020, judgement was entered against MWSSC and the Company was ordered to pay amounts totalling K117, 902 in respect of outstanding amount (K87, 902) and legal fees (K30, 000).

  As at 30th September, 2021 amounts totalling K63,751 had been paid leaving a balance of K54,151.

f. Staff Related Matters

i. Irregular Payment of Leave Pay

Management Conditions of Service and Collective Agreement No. 37 stipulates that leave pay should be paid to an officer who takes leave of not less than thirty (30) working days.

Contrary to the Conditions of Service, during the period under review, amounts totalling K435,129 were paid as leave pay to forty-two (42) officers who proceeded on leave without authority in that there were no approved leave forms or any other records to support their proceeding on leave. As at 30th September 2021, the position had not changed.

ii. Failure to Recover Salary Advances

Collective Agreement No. 25 stipulates that an employee is entitled to a salary advance of a maximum of his or her monthly basic salary with a recovery period of three (3) months.

Contrary to the collective agreement, salary advances in amounts totalling K19,500 paid to eight (8) officers during the period under review had not been recovered as at 30th September 2021.

iii. Failure to Provide Oral Contracts

During the period under review, amounts totalling K261,110 were paid to three (3) officers to facilitate payment of wages to 176 casual workers. However, there were no oral contracts availed to ascertain whether the casual workers were legitimately engaged. As at 30th September 2021, the position had not changed.

iv. Failure to Recover 25% of the Cost of the Mobile Phone Handsets

Management Conditions of Service No. 10.1 stipulates that the Company was to assist staff in grades M1 to M3 to purchase mobile phone handsets on a cost sharing basis. The employees were to pay 25% of the total cost of the handset through payroll deductions in two equal instalments.

Contrary to the Conditions of Service, seven (7) mobile handsets costing K89,795 were purchased for directors during the period from August 2019 to September 2020 without effecting deductions in amounts totalling K22,449 representing 25% of the total cost of the handsets. As at 30th September 2021, no recoveries had been made from the officers.

g. Asset Management

i. Lack of Asset Management Policy

The Asset Management Policy gives guidance on the acquisition, recording, asset maintenance, use and disposal of an entity's non-current assets. Furthermore, the Policy also defines the parameters for updating the fixed asset register including the date of purchase, location or beneficiary department, asset class, asset description, method of valuing asset, depreciation rate and asset code.

However, it was observed that during the period under review, the Company had no Assets Management Policy. In this regard, it was not clear how the Company was managing its assets. As at 30th September 2021, the position had not changed.

ii. Lack of Title Deeds

Section 41(4) of the Public Finance Management Act No. 1 of 2018 requires Controlling Officers to ensure that all public properties under their charge are secure with title deeds.

Contrary to the Act, the Company did not secure title deeds for parcels of land on which infrastructure such as office buildings, water reservoirs, sewer ponds and water treatment plants valued at K63,179,727 were located as at 30th September 2021.

iii. Poor Maintenance of Infrastructure

A physical inspection carried out in August 2021 at water treatment plants, booster stations, sewer ponds and zonal office in three (3) districts namely: Chingola, Chililabombwe and Mufulira revealed that some water pumps, tanks and other equipment were defective and non-functional and in some cases structures were in a dilapidated state due to lack of maintenance. In particular, the following were observed:

- **Kafue Chingola Water Treatment Plant**
  - **Defective Water Pump**

    The plant had three (3) pumps of which two (2) were supposed to be running at any given time while one (1) pump was supposed to be on standby. However, it was observed that one (1) pump was defective and not working.

  - **Faulty Chlorine and Aluminum Sulphate Dosing Tanks**

    Two (2) dosing tanks were used to add chemicals for water treatment. However, as at 30th September 2021 both tanks were not working. See pictures below.

Non – operational dosing tanks

  - **Defective Aluminium Sulphate Dosing Equipment**

    Three (3) aluminium sulphate dosing equipment costing K1,554,625 (US$99,033.30) bought in 2020 for water treatment was not working. Inquiries made with management revealed that the equipment only worked for three (3) months. As at 30th September 2021, the Company was using the old pump. See picture below.

Non-operational aluminium dosing equipment

As at 30th September 2021, no action had been taken to have the equipment repaired or replaced.

- **Water Distribution Pump**

  There were four (4) water distribution pumps of which one (1) pump was not working and a non-return valve had a leakage on the bend thereby causing continuous loss of water.

- **Kabundi Water Booster**

  Out of three (3) high lift pumps required, only two (2) were working.

- **The Close Booster Station**

  Out of three (3) pumps required, one (1) pump had broken down and not replaced as at 30th September 2021.

- **Chililabombwe Water Treatment Plant**
  - There were cracks in the old filter house.
  - The plant had two (2) regulators and one (1) scale of which one (1) regulator and a scale were faulty.
- **Mufulira District**
  - **Chibolya Treatment Plant**

    The treatment plant had five (5) pumps of which two (2) were not working.

  - **Kantanshi Zonal Office**
    - The building was old with leakages in the roof.
    - The building was not secured as it was not fenced off making it vulnerable to thieves.
    - The maintenance crew's office had no door and was only secured by a grill door with a piece of rusted roofing sheet covering it.
  - **Kankoyo South Pond**
    - The sewer pond was not functioning as vegetation had over grown.
    - The embankment to the pond was broken down due to vandalism.
    - Sewer effluent was not flowing into the pond as the sewer inlet lines were blocked by residents and the effluent was being diverted into their gardens.

- **Mufulira Divisional Office**

  The building was old and big cracks had manifested in the secretary's office.

- **Mupambe Sewer Pump Station**

  - The sewer pump station was not fenced off to protect it from access by unauthorised persons.
  - The sewer pump building was old, and the roofing sheets had developed rust.
  - The pond was not covered and was a danger to the local community. See picture below.

Uncovered Sewer pump pond

- **17th Street Booster Station**

  The booster station had two (2) pumps out of which one (1) was not working. See picture below.

Damaged pump

- **River Water Pump Station**

  - The pump station had three (3) pumps and only one (1) pump was working.
  - The pump station was not fenced off to protect it from access by unauthorised persons. See picture below.

The unfenced facility

- **Chibolya Water Kiosk No. 1**

  The water kiosk was non-functional and had been abandoned.

- **Kawama West Pond**

  - Although the pond was functioning, the traps which filter the solid waste from the liquid waste was vandalized.
  - The pond had overgrown vegetation.

- **Kamuchanga Booster Pump**

  - The booster pump station had three (3) pumps of which one (1) pump was not working.
  - The outlet valves on the overhead tank and the township supply lines were old and were leaking.
  - The facility was not fenced off making it vulnerable for theft and vandalism.

13. Nkana Water Supply and Sanitation Company Limited

13.1 *Background*

a. Establishment

Nkana Water Supply and Sanitation Company Limited (NWSC) was established under section 9 (c) part III of the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation amendment Act No. 10 of 2005.

The Company was incorporated as a private company limited by shares under the Companies Act Cap 388 of the Laws of Zambia in 1998 and commenced its operations in 2000. NWSC is owned equally by two (2) local authorities namely; Kitwe City and Kalulushi Municipal Councils on the Copperbelt Province with the primary business to provide water and sanitation services to customers in the said towns.

The Company's shareholding is as shown in the table 1 below.

Table 1: Shareholding %

No.	Shareholders	Shareholding (%)
1	Kitwe City Council	70
2	Kalulushi Municipal Council	30
	Total	**100**

b. Governance Structure

The Company is governed by a Board of Directors comprising ten (10) members as detailed below:

i. a Mayor or Chairperson from one of the participating Councils;

ii. a Town Clerk or Council Secretary from one of the participating Councils;

iii. the Provincial Local Government Officer or representative;

iv. a representative from the Engineering Institution of Zambia;

v. two (2) representatives from the private sector;

vi. a commercial consumer category representative;

vii. a domestic consumer category representative; and

viii. two (2) members appointed by the Minister, one of whom shall be the Chairperson of the Board.

The Board members hold office for a term of three (3) years and are eligible for reappointment upon expiry of their term of office but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the Company and is assisted by six (6) Directors in charge of Finance, Infrastructure Development, Human Resource and Administration, Engineering, Commercial and Legal/Company Secretary.

d. Sources of Funds

The sources of funds for the Company include, such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The Company also receives grants from the Government and Co-operating partners.

e. Information and Communication Technology (ICT) Systems

During the period under review, the Company operated four (4) ICT systems as detailed below:

i. EDAMS System - used for revenue collection, billing, fault management and maintenance.

ii. Lapis System - used to administer prepaid meters.

iii. SunSystems - used for administration of accounting transactions.

iv. Dove Payroll **-** used in the administration and processing of payroll.

13.2 Audit Findings

An examination of financial and other records maintained at the headquarters and regional offices for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services, connection charges in amounts totalling K503,615,000 against a budget of K498,988,000 resulting in a negative variance of K4,627,000. See table 2 below.

Table 2: Budget and Income

No.	Source of Funds	2020		2019		Total		
		Budget K'000	Income K'000	Budget K'000	Income K'000	Budget K'000	Income K'000	Variance K'000
1	Water Charges	171,749	131,081	151,563	131,938	323,312	263,019	60,293
2	Sanitation Charges	39,506	29,125	38,176	30,407	77,682	59,532	18,150
3	Other Revenue	49,659	134,623	48,335	46,441	97,994	181,064	(83,070)
	Total Revenue	**260,914**	**294,829**	**238,074**	**208,786**	**498,988**	**503,615**	**(4,627)**

b. Unpaid Water Bills

Commercial Services Policy and Procedures of 2013 provides that bad debt management principles should be proactive and aimed at avoiding a huge growth in debt and prescribing a disposal method that is beneficial to the Company. Bad debt will be provided for all domestic customers balances that are more than 60 days old. The movement of debtors from the previous financial year and closing balance for the period will be provided for at 100%.

A review of the billing system revealed that the Company was owed amounts totalling K355,518,875 as at 30th December 2020 in respect of unpaid water bills. See table 3 below.

Table 3: Unpaid Water Bills

No.	Category	Bills as at Dec 2020
1	Commercial	42,472,162
2	GRZ	47,969,631
3	Churches	5,582,962
4	High Cost	33,346,323
5	Medium Cost	42,389,886
6	Low Cost	119,372,860
7	Pre paid	64,385,051
	Total	**355,518,875**

c. Comparative Performance in the Water and Sanitation Sector

A review of the National Water and Sanitation Council (NWASCO) sector reports in relation to the performance of Nkana Water Supply and Sanitation Company for the years 2019 and 2020 revealed that the Company's ranking improved from position eight (8) in 2019 to one (1) in 2020 out of the eleven (11) water utility companies in the Country.

However, the following were observed:

i. Non- Revenue Water (NRW)

Non-Revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on un-metered customers' premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network. However, the Company's NRW was 49% in 2019 and 60% in 2020 which resulted in a cumulative loss of K599,479,468 See table 4 below.

Table 4: Non-Revenue Water

No.	Details	2020	2019	Total
1	Total water production (m3)	56,478,792	44,662,587	101,141,379
2	Total water billed (m3)	22,460,621	22,737,487	45,198,108
3	NRW (m3)	34,018,171	21,925,100	55,943,271
4	NRW (%)	60%	49%	
5	Benchmark (%)	25%	25%	
	Revenue loss on NRW (K)	**283,542,003**	**315,937,465**	**599,479,468**

The NRW above the benchmark deprived the Company of the revenue to help improve its operations during the period under review.

ii. Metering Ratio

Metering ratio is the proportion of the metered connections compared to the total connections. It is an important tool with regards to controlling non-revenue water. The acceptable benchmark for metering ratio was 100%. However, during the period under review the Company only managed to attain 90% in 2019 and 92% in 2020. See table 5 below.

Table 5: Metering Ratio

No.	Year	Benchmark (%)	Metering Ratio (%)	Variance (%)
1	2019	100%	90%	10%
2	2020	100%	92%	8%

Failure to meter all the customers resulted in revenue loss to the company through wastage on unmetered customers.

d. Infrastructure - Failure to Maintain Equipment

A physical inspection carried out on 15th September 2021 at Mindolo distribution Centre revealed that a number of pipes had water leakages. Inquiries made with management revealed that pipes had been leaking for over twelve (12) months.

As at 30th September 2021, the position had not changed.

e. Asset Management - Lack of Title Deeds

Section 41(4) of the Public Finance Management Act No. 1 of 2018 requires Controlling Officers to ensure that all public properties under their charge are secured with title deeds.

Contrary to the Act, the Company did not secure title deeds for parcels of land on which twenty four (24) properties such as distribution centres, raw water intakes and offices valued at K182,578,341 were located as at 30th September 2021.

f. Staff Related Matters - Failure to Fill Key Vacant Positions

During the period under review, the Company had an establishment of 675 positions out of which 554 were filled leaving 123 vacant as at 31st December 2020. Some of the positions had been vacant for more than twelve (12) months. Out of the vacant positions three (3) positions were key to the running of the organisation namely Manager Water and Sanitation, Senior Procurement officer and Plant Operator.

14. North-Western Water Supply and Sanitation Company Limited

14.1 Background

a. Establishment

The North Western Water Supply and Sanitation Company Limited (NWWSSC) was incorporated in November 1999 as a company limited by shares under the Companies Act Chapter 388 of the Laws of Zambia and Section 9 (1) (c) of the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation Act No. 10 of 2005.

The Company commenced its operations in March 2000 with a mandate to provide water and sanitation services in the urban and peri-urban areas of the North Western Province. The company's shareholding is as shown in table 1 below.

Table 1: Shareholding %

No.	Shareholder	Shareholding %
1	Solwezi Municipal Council	39
2	Mwinilunga Town Council	12
3	Kasempa Town Council	6
4	Mufumbwe Town Council	6
5	Kabompo Town Council	20
6	Zambezi Town Council	13
7	Chavuma Town Council	4
	Total	**100**

b. Governance - Board of Directors

The Company is governed by a Board of Directors comprising ten (10) members as detailed below:

i. a Mayor or Chairperson from one of the participating Councils;
ii. a Town Clerk or Council Secretary from one of the participating Councils;
iii. the Provincial Local Government Officer;
iv. a representative from the Engineering Institute of Zambia;
v. two (2) representatives from the private sector in the province;
vi. a commercial consumer category representative;
vii. a domestic consumer category representative; and
viii. two (2) members to be appointed by the Minister, one of whom shall be the Chairperson of the board.

The Board Members of the Company hold office for a term of not more than three (3) years and are eligible for reappointment upon expiry of their term of office but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the Company and is assisted by two (2) Directors responsible for Engineering and Finance and three (3) Managers responsible for Public Relations and Commercial Services, Human Resources and Administration and Business Development and Risk Management.

d. Sources of Funds

The sources of funds for the Company include, such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The Company also receives grants from the Government and Co-operating Partners.

e. Information Communications Technology (ICT)

During the period under review, the Company operated three (3) ICT software systems as detailed below:

i. Sage Evolution Enterprise Resource Planning (ERP)- used for processing billing and accounting transactions;
ii. Bulk Messaging System (BMS) – used for sending reminders and alert messages to the Company's customers; and
iii. Dove Payroll System – used for managing the payroll.

14.2 Audit Findings

An examination of financial and other records maintained at the headquarters and regional offices for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services, connection charges in amounts totalling K64,317,936 against a budget of K83,001,413 resulting in a negative variance of K18,683,477. See table 2 below.

Table 2: Budget and Income

No.	Source of Funds	2020		2019		Total	Total	Variance
		Budget K	Income K	Budget K	Income K	Budget K	Income K	K
1	Water Charges	32,533,475	28,804,384	35,243,176	26,132,375	67,776,651	54,936,759	(12,839,892)
2	Sanitation Charges	1,764,431	1,139,954	1,814,531	1,328,888	3,578,962	2,468,842	(1,110,120)
3	Other Water Revenue	6,748,000	2,885,332	4,897,800	4,027,003	11,645,800	6,912,335	(4,733,465)
	Total Revenue	**41,045,906**	**32,829,670**	**41,955,507**	**31,488,266**	**83,001,413**	**64,317,936**	**(18,683,477)**

In addition, the Company received a total amount of K1,699,667 as Government grants (Operations grant K699,667 and Capital projects K1,000,000) bringing the total income to K66,017,603.

As at 31st December 2020, out of the total income of K66,017,603 amounts totalling K64,435,625 had been spent leaving a balance of K1,581,978.

b. Corporate Governance – Failure to Appoint a Full Board

On 1st December 2011, the Ministry of Local Government and Housing issued Ministerial Guidelines through Circular No. MLGH/102/17/1 to all water utility companies on the size, composition and chairmanship of the Board of Directors. The Circular provided that each water utility company should have a Board made up of ten (10) members.

Contrary to the circular, the Company had seven (7) Board Members appointed during the period under review leaving three (3) vacancies namely; Provincial Local Government Officer, a representation from the Engineering Institute of Zambia and a Town Clerk or Council Secretary from one of the participating Councils not filled as at 30th September 2021.

c. Management of Information and Communication Technology Systems

i. Lack of IT Steering Committee

CoBIT APO01.01 requires that an organisation should establish an ICT steering committee (or equivalent) composed of executive, business and ICT management to:

- determine prioritization of ICT-enabled investment programmes in line with the business strategy and priorities;
- track status of projects and resolve resource conflicts; and
- monitor service levels and service improvements.

During the period under review, the Company did not have an ICT Steering Committee or its equivalent to oversee the process of implementing and monitoring the entity's

ICT projects and activities. Consequently, ICT enabled investments such as implementation of Sage Evolution and Dove ERPs systems for processing billing and accounting transactions and Bulk SMS for sending reminder and alert messages were implemented without guidance of the ICT Steering Committee.

ii. **Lack of IT Strategic Plan.**

CoBIT APO02.01 states that the organisation should provide a holistic view of the current business and IT environment, the future direction, and the initiatives required to migrate to the desired future environment.

During the period under review, the Company operated without an ICT Strategic Plan. Consequently, ICT investment in applications and infrastructure were being done without alignment to the Company's overall goals and objectives.

iii. **Lack of Off-Site Backup Facility**

CoBIT DSS4.9 requires an organisation to store offsite all critical backup media, documentation and other ICT resources necessary for ICT recovery and business continuity plans.

During the period under review, the Company did not have an offsite location for storage of backups. All backed up information for billing and accounting data was being stored onsite thus exposing the institution to single point of failure. In addition, the Company had no backup policy.

d. Comparative Performance in Water and Sanitation Sector

A review of the National Water and Sanitation Council (NWASCO) sector reports in relation to the performance of the Company for the years 2019 and 2020 revealed that the Company's ranking dropped from position five (5) in 2019 to seven (7) in 2020 out of the eleven (11) water utility companies in the country.

The drop in ranking was attributed to under performance in operational indicators.

In particular, the following were observed:

i. **Non - Revenue Water (NRW)**

Non-Revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on un-metered customers' premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network.

However, the Company's NRW was 26% and 37% which resulted in a cumulative loss of K24,843,904. See table 3 below.

Table 3: Non - Revenue Water

No.	Details	2020	2019	Total
1	Total Water Production (m3)	5,900,000	4,900,000	10,800,000
2	Total Water Billed (m3)	3,717,000	3,626,000	7,343,000
3	NRW(m3)	2,183,000	1,274,000	3,457,000
4	NRW(%)	37	26	
5	Benchmark (%)	25	25	
	Revenue loss on NRW (K)	**15,776,022**	**9,067,882**	**24,843,904**

The NRW above the benchmark deprived the Company of the revenue to help improve its operations during the period under review.

ii. Sanitation Coverage

Sanitation Coverage is the proportion of the urban population with access to sanitation services.

A review of the Sanitation Coverage operational indicator revealed that during the period under review, the Company's sanitation cover was 15.70% in 2019 and 23.8% in 2020 which was far below the NWASCO benchmark of 80%. See table 4 below.

Table 4: Sanitation Coverage

Year	Benchmark	Actual Sanitation Coverage	Variance
2019	80%	15.7%	-64.3%
2020	80%	23.8%	-56.2%

As a result, a substantial number of urban households did not have access to sanitation services during the period under review which could compromise public health.

iii. Water Supply Coverage

Water coverage represents the proportion of the population serviced by domestic connections through individual household connections, kiosks, public stand posts and shared/yard taps. During the period under review, the water supply coverage ratios were as shown in table 5 below.

Table 5: Water Coverage

Year	Benchmark	Actual Water Coverage	Variance
2019	80%	81.67%	2%
2020	80%	70.13%	-10%

Although the Company's water supply coverage was above the benchmark ratio of 80% in 2019, it plummeted to 70.13% in 2020.

e. Accounting Irregularities

i. Non - Preparation of Financial Statements

In Paragraph 7 of the Special Report of the Auditor General on the Accounts of Water and Sanitation Companies for the financial year ended 31st December 2018, mention was made of the failure by the Company to prepare financial statements which resulted in non-certification of financial statements.

A review of the matter in October 2021, revealed that the situation had not changed as the Company had failed to prepare financial statements for the years 2019 and 2020.

ii. Failure to Update Collections Accounts

During the period under review, the Company operated systems through eleven (11) collection points and collections accounts in the eight (8) districts. The system is configured in such a way that when a customer pays, the account is credited while the collections account is debited automatically. The role of the accounts department at Head Office is to ensure that all deposit slips are posted to the system. When this is done, the collections account is credited to clear the debits while the cash book (ledger) receipts is debited to account for funds received.

However, a review of the collections account revealed that the Company had not posted deposit slips in amounts totalling K23,314,960 as at 31stDecember 2020 resulting in an overall understatement of income in the cashbook.

iii. Failure to Collect Receivables

In Paragraph 7 of the Special Report of the Auditor General on the Accounts of Water and Sanitation Companies for the financial year ended 31st December 2018, mention was made of the failure by the Company to collect receivables in amounts totalling K11,648,792.

A review of the matter revealed that the situation had worsened during the period under review, in that the Company was owed a total amount of K16,370,646 from unpaid water bills as at 31st December 2020.

iv. Failure to Connect Customers

North Western Water Supply and Sanitation Company Commercial Policy No. 4.7 stipulates that upon making full payment of the charge, the water connection must be done within fourteen (14) days.

Contrary to the policy, 347 customers who had paid in full connection fees in amounts totalling K420,677 during the period under review, had not been connected to the main water supply network as at 30th September 2021.

The customers had remained unconnected for periods ranging from six (6) to twenty-three (23) months.

v. Lack of Safe Facilities

Financial Policy on the management of cash for water supply and sanitation companies states that, "No staff member is permitted to hold any cash at home on behalf of the Company overnight" and that "All cash must be deposited into the bank or with the Cashier in the safe".

However, there were no safe facilities at five (5) cash collection points in Chavuma, Zambezi, Kasempa, Kabompo and Mwinilunga.

As at 30th September 2021, the position had not changed.

vi. Failure to Remit Statutory and Other Contributions

In Paragraph 7 of the Special Report of the Auditor General on the Accounts of Water Supply and Sanitation Companies for the financial year ended 31st December 2018, mention was made of the Company's failure to remit statutory contributions in amounts totalling K11,193,377.

A review of the matter revealed that the situation had worsened during the period under review, in that the Company was owing a total amount of K20,609,742 in respect of unsettled statutory and other obligations as at 31st December 2020. See table 6 below.

Table 6: Unremitted Statutory and Other Contributions

No.	Details	Amount K
1	PAYE	17,906,071
2	ZWASEAWU	314,341
3	Workers Compensation	176,498
4	NAPSA	2,212,832
	Total	**20,609,742**

The statutory and other obligations had been outstanding for periods ranging from one (1) to five (5) years.

15. Southern Water Supply and Sanitation Company Limited

15.1 Background

a. Establishment

Southern Water Supply and Sanitation Company Limited (SWSSC) was established under Section 9 (c) Part III of the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation amendment Act No. 10 of 2005.

The Company was incorporated as a private company limited by shares under the Companies Act Chapter 388 of the Laws of Zambia in 1999 and commenced its operations in 2000. The Company's shareholding is as shown in table 1 below.

Table 1: Shareholding %

No.	Shareholders	Shareholding %
1	Livingstone City Council	38.95
2	Kazungula Town Council	23.02
3	Kalomo Town Council	9.31
4	Choma Municipal Council	8.21
5	Monze Municipal Council	2.40
6	Mazabuka Municipal Council	2.28
7	Sinazongwe Town Council	7.83
8	Munyumbwe Town Council	2.32
9	Namwala Town Council	0.81
10	Siavonga Town Council	2.01
11	Zimba Town Council	0.60
12	Chikankata Town Council	1.64
13	Pemba Town Council	0.32
14	Itezhi tehzi Town Council	0.33
	Total	**100**

b. Governance Structure

The Company is governed by a Board of Directors comprising ten (10) members as detailed below.

i. a Mayor or Council Chairperson from participating councils;

ii. a Town Clerk or Council Secretary from participating councils;

iii. the Provincial Local Government Officer or representative;

iv. a representative from the Engineering Institution of Zambia;

v. two (2) representatives from the Private Sector;

vi. a community representative from the commercial consumer category;

vii. a community representative from the domestic consumer category; and

viii. two (2) members appointed by the Minister, one of whom shall be the Chairperson of the Board.

The Board Members of the Company hold office for a term of not more than three (3) years and are eligible for reappointment upon expiry of their term of office but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the Company and is assisted by four (4) senior managers responsible for Technical Services, Finance, Commercial Services and Human Resource and Administration.

d. Sources of Funds

The sources of funds for the Company include, such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The Company also receives grants from the Government and Co-operating Partners.

15.2 Audit Findings

An examination of financial and other records maintained at the headquarters and regional offices for the financial years ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services, connection charges in amounts totalling K174,944,927 against a budget of K196,561,251 resulting in a negative variance of K21,616,324. See table 2 below.

Table 2: Budget and Income

No.	Source of Funds	2020		2019		Total	Total	Variance
		Budget K	Income K	Budget K	Income K	Budget K	Income K	K
1	Water Charges	86,907,037	73,811,630	76,137,749	70,576,467	163,044,786	144,388,097	(18,656,689)
2	Sanitation Charges	9,195,292	7,478,772	7,263,196	7,536,692	16,458,488	15,015,463	(1,443,025)
3	Other Water Revenue	9,124,602	7,181,699	7,933,374	8,359,667	17,057,977	15,541,366	(1,516,610)
	Total Revenue	**105,226,932**	**88,472,101**	**91,334,320**	**86,472,826**	**196,561,251**	**174,944,927**	**(21,616,324)**

In addition, the company received a total amount of K42,730,999 as capital (K39,600,510) and revenue (K3,130,489 - impact of COVID-19) grants from government bringing the total income to K217,675,925. As at 31st December 2020, amounts totalling K221,348,431 had been spent leaving a deficit of K3,672,505.

b. Financial Performance - Statement of Comprehensive Income

The Statements of Comprehensive income for the financial years ended 31st December 2019 and 2020 were as shown in table 3 below.

Table 3: Statement of Comprehensive Income

Details	2020 K	2019 K
Turnover	86,871,092	83,367,369
Cost of Sales	(65,537,106)	(47,423,979)
Gross Profit	21,333,986	35,943,390
Other Income		
Amortisation of capital grants	24,442,528	7,943,788
Operating grant	3,130,489	-
Other Income	2,682,139	5,351,662
Net Income	**51,589,142**	**49,238,840**
Administrative Expenses	53,865,533	48,840,215
Finance costs	1,515,950	278,793
Comprehensive Income (loss) for the year	**(3,792,341)**	**119,832**

Profitability

As can be seen from the Statement of Comprehensive Income in table 3 above, the Company made a profit of K119,832 in 2019 and incurred losses of K3,792,341 in 2020. The loss was attributed to high operating expenses of K53,865,533 which accounted for 62 % of turnover.

c. Statement of Financial Position

During the period under review, the Company's Statement of Financial Position was as shown in table 4 below.

Table 4: Statement of Financial Position

Details	2020	2019
	K	K
Non -Current Assets		
Property Plant and Equipment	241,614,160	241,327,369
Investment in Subsidiary	750,000	750,000
	242,364,160	**242,077,369**
Current Assets		
Inventories	2,889,301	2,892,923
Trade and other receivables	36,274,641	29,857,687
Cash and bank	88,326	-
	39,252,268	**32,750,610**
Total Assets	**281,616,428**	**274,827,979**
Equity and Liabilities		
Capital and Reserves		
Share capital	20,000	20,000
Revaluation Reserve	10,418,548	12,471,000
Retained income	9,803,615	13,595,957
	20,242,163	**26,086,957**
Non-Current Liabilities		
Retirement benefit obligation	36,86,650	29,222,075
other liabilities	149,892,003	172,969,353
	186,078,653	**202,191,428**
Current Liabilities		
lease liability	5,845,949	-
Trade and other payables	69,449,663	45,063,053
Bank overdraft	-	1,486,541
	75,295,612	**46,549,594**
Total equity and liabilities	**281,616,428**	**274,827,979**

i. Liquidity Position

The Current Ratio measures the ability of an entity to meet its current financial obligations using its current assets. It is determined by comparing current assets against current liabilities. The NWASCO recommended current ratio for the sector is a minimum of 1:1.

During the period under review, the current ratio for the Company was 0.70 in 2019 and 0.52 in 2020 which were below the recommended ratio as shown in table 5 below.

Table 5: Liquidity Position

No.	Details	2020 K	2019 K
1	Current Assets	39,252,268	32,750,610
2	Current Liabilities	75,295,612	46,549,594
3	Working Capital	(36,043,344)	(13,798,984)
4	Current Ratio	0.52	0.70

As can be seen from table 5 above, the working capital of the Company worsened from negative K13,798,984 in 2019 to negative K36,043,344 in 2020.

The low current ratio and worsening working capital implied that the Company had challenges in meeting its short-term financial obligations.

ii. Receivable Days

The Company's Commercial Policy provides for the collection of receivables within thirty (30) days. Contrary to the policy, the Company's receivable days were 131 days in 2019 and worsened to 152 days in 2020. See table 6 below.

Table 6: Increase in Receivables

No.	Details	2020 K	2019 K
1	Receivables	36,274,641	29,857,687
2	Turnover	86,871,092	83,367,369
3	Receivable days	152 days	131 days

As can be seen in the table above, the trade receivables increased from K29,857,687 to K36,274,641 in 2019 and 2020 respectively, thus contributing to the failure to meet its short- term obligations.

iii. Return on Capital Employed (ROCE)

Return on Capital Employed (ROCE) is a measure of the returns that a business is achieving from the capital employed, usually expressed in percentage terms. ROCE indicates the efficiency and profitability of a company's capital investments.

During the period under review, the Company's ROCE was as shown in the table 7 below.

Table 7: Return on Capital Employed (ROCE)

No.	Details	2020 K	2019 K
1	Total Assets	242,364,160	242,077,369
2	Current Liabilities	39,252,268	32,750,610
3	**Capital Employed**	**203,111,892**	**209,326,759**
4	Earnings(Loss) Before Interest and Tax	-3,972,341	119,832
5	**Return on Capital Employed(ROCE)**	**-2%**	**0.1%**

As can be seen from table above, the Company had a ratio of 0.1% in 2019 and worsened to -2% in 2020 indicating that the company was failing to effectively utilize its capital to generate funds for its shareholders.

d. Operational Matters

i. Comparative Performance in the Water and Sanitation Sector

A review of the National Water and Sanitation Council (NWASCO) Sector reports in relation to the performance of the Company for the years 2019 and 2020 revealed that the Company's ranking dropped from position one (1) in 2019 to four (4) in 2020 out of the eleven (11) water utility companies in the Country. The drop-in ranking was attributed to under performance in operational indicators. In particular, the following were observed:

- **Non - Revenue Water (NRW)**

  Non-revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on unmetered customers' premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network.

  However, the Company's NRW was 41% and 39% in 2019 and 2020 respectively which resulted in a cumulative loss of K115,640,000. See table 8 below.

Table 8: Non- Revenue Water

No.	Details	2020	2019	Total
1	Total Water Production (m3)	22,000,000	22,500,000	44,500,000
2	Total Water Bill	13,400,000	13,200,000	26,628,000
3	NRW (m3)	8,600,000	9,200,000	17,800,000
4	NRW%	39%	41%	
5	Benchmark (%)	25%	25%	
6	Reveneue Loss on NRW (K)	56,760,000	58,880,000	115,640,000

The NRW above the benchmark deprived the Company of the revenue to help improve its operations during the period under review.

- **Metering Ratio**

Metering ratio is the proportion of the metered connections compared to the total connections. It is an important tool with regards to controlling non-revenue water.

The acceptable benchmark for metering ratio was 100%. However, the Company only managed to attain 77% in 2019 and 76% in 2020. See table 9 below.

Table 9: Metering Ratio

Year	Benchmark (%)	Metering Ratio (%)	Variance (%)
2019	100%	77%	23%
2020	100%	76%	24%

Failure to meter all the customers resulted in revenue loss to the company through wastage on unmetered customers.

- **Staff Efficiency Indicator**

This measures the output of personnel in relation to various aspects of operations such as billing, connections and personnel costs. The Staff Efficiency indicator compares the number of employees to the number of water connections. For the staff cost in relation to the billing and collection, NWASCO target for the sector was 0.4 (or 40%) or less.

However, during the period under review, the Staff Efficiency indicator for SWSSC was 57% in 2019 and 58% in 2020 which exceeded the benchmark of 40% or less standard set by NWASCO. See table 10 below.

Table 10: Staff Efficiency Indicator

Year	Benchmark	Staff Efficency	Variance
2019	0.4	0.57	-0.17
2020	0.4	0.58	-0.18

As a result, staff costs were high in relation to the operations thereby affecting the efficiency of the Company.

e. Management of Payroll and Staff Related Matters - Failure to Recover Staff Loans

Conditions of Service for SWSSC Section 3.12 (c) states that the recovery period of staff loans should be thirty-six (36) calendar months.

Contrary to the conditions of service, four (4) officers who were paid staff loans in amount totalling K66,584 during the period 2015 to 2019 did not have their loans recovered as at 30th September 2021. See table 11 below.

Table 11: Unrecovered Staff Loans

Details	Date of payment	Amount Paid K
Officer 1	30th April, 2017	39,783
Officer 2	19th June, 2019	14,896
Officer 3	4th August, 2015	3,479
Officer 4	31st October,2018	8,426
Total		**66,584**

As can be seen from the table above, some loans date as far back as 2015 and 2017.

It was further observed that a salary advance of K3,000 which was paid to an officer on 23rd March, 2017 had not been recovered as at 30th September 2021 and the officer has since left the Institution.

f. Accounting Irregularities

i. Unaccounted for Revenue

SWSSC Guideline No. 4.2. (i) (ii) (iii) stipulates that all funds received must be correctly receipted, posted into the accounting / billing package and that the funds receipted in a day be correctly recorded in the daily collections books and banked on a daily basis.

Contrary to the guidelines, amounts totalling K59,201 collected in 2020 at two (2) stations in Namwala and Zimba districts, had not been accounted for in that neither deposit slips nor cash was found on hand.

As at 30th September 2021, no action had been taken against the officers at the two (2) stations.

ii. Wasteful Expenditure

- **Questionable Purchase of a House - Mazabuka**

  In Paragraph 16 (f) of the Auditor General's Report on Parastatal Bodies and other Statutory Institutions for the financial year ended 31st December 2015, mention was made of the purchase of a house in Mazabuka by the Company at a total cost of K550,000.

  According to the report, as at 30th June 2016, the Company had paid a total amount of K400,000 towards the purchase of the house and it was observed that the property did not have title deeds.

  A review of the situation in August 2021 revealed that the Company had paid an additional amount of K100, 000 towards the purchase of the house bringing the total payments to K500,000 as at 30th September 2021.

  It was further observed that although K500,000 had been paid, the house had been repossessed through a High Court judgement. In particular, it was observed that documents upon which the payment was based were declared not genuine by the courts of law. In this regard, the amount of K850,000 (comprising of K350,000 legal fees and K500,000 for the purchase of the house) was wasteful in that the Company did not exercise due diligence to ascertain the true owner of the house.

  The following were also observed:

  - There was no contract of sale availed for audit as at 30th September 2021.
  - An amount of K500,000 paid towards the purchase of the house, which did not belong to the Company, was being recognised in the financial statements for 2019 and 2020 as work in progress.

- **Appointment of the Managing Director**

  According to Terms and Conditions of Service for Senior Management No. 2.1, the Managing Director and Directors must be appointed by the Board of Directors. During the period from 2016 to November 2018, the Company had no Board of Directors and it was observed that on 5th December 2016, the contract for the Managing Director expired.

Contrary to the Terms and Conditions of Senior Management No. 2.1, the Permanent Secretary in the Ministry of Water Development, Sanitation and Environment Protection offered the Managing Director a contract of employment starting from 5thDecember 2016 to 12th February 2018 in the absence of the Board which he later withdrew on 16th August 2018. The Board of Directors was only constituted in November 2018.

Consequently, on 12th November 2018 the former Managing Director sued the company for unfair dismissal and on 23rd December 2019 judgement was passed in his favour and he was compensated an amount of K200,798 which the Company paid on 30th April 2020.

Therefore, the expenditure of K256,400 comprising damages awarded to the former Managing Director (K200,798) and legal fees (K55,602) was wasteful in that it could have been avoided had the board been constituted during the period in question.

- **Rehabilitation and Expansion of Water and Sewerage Infrastructure - Choma**

  On 14th December 2017, the Company signed a contract with China State Construction Engineering Cooperation Limited (CSCEC) for the rehabilitation and expansion of water and sewerage infrastructure in Choma at a contract sum of K95,229,950.

  The source of funds for the project was from the Government of the Republic of Zambia. The contract duration period was 365 calendar days with the effective commencement date of 1st March 2018 and the expected completion date of 31st March 2019.

  The contractor moved on site in March 2018 and was paid K2,000,000 towards mobilisation. It was however observed that the contractor abandoned the site in April 2018 resulting into a wasteful expenditure of K2,000,000.

  As at 30th September 2021, the funds had not been recovered.

iii. Lack of Title Deeds

Section 41(4) of the Public Finance Management Act No. 1 of 2018 requires controlling officers to ensure that all public properties under their charge are secured with title deeds.

Contrary to the Act, as at 30th September 2021, the Company had not secured title deeds for parcels of land on which 199 properties were located.

iv. Failure to Settle Outstanding Obligations

The Company had accrued debts in amounts totalling K47,274,375 in respect of suppliers of various goods, services, rental, sundry and other bills as at 31st December 2020. See table 12 below.

Table 12: Outstanding Bills

No.	Details	Amount K
1	Various Suppliers	9,276,740
2	Utilities	34,960,132
3	Insurance	760,383
4	Service	612,478
5	Rental	71,388
6	Sundry and Other	1,304,880
7	Legal Fees	288,374
	Total	**47,274,375**

As at 30th September 2021, the bills had not been settled.

v. Failure to Remit Statutory Contributions

In Paragraph 8 of the Special Report of the Auditor General on the Accounts of Water Supply and Sanitation Companies for the financial year ended 31st December 2018, mention was made of the Company's failure to remit statutory contributions in amounts totalling K2,380,022.

A review of the matter revealed that the situation had worsened during the period under review, in that the Company was owing a total amount of K18,239,454 in respect of unsettled statutory obligations as at 31st December 2020. See table 13 below.

Table 13: Unremitted Statutory Contributions

No.	Name of Institution	Details	2020 K	2019 K
1	Zambia Revenue Authority	PAYE	9,843,198	3,721,308
2	National Pension Scheme Authority	Pension	1,161,472	1,668,457
3	National Pension Scheme Authority	Penalties	7,234,784	-
	Total		**18,239,454**	**5,389,765**

16. Western Water Supply and Sanitation Company Limited

16.1 Background

a. Establishment

The Western Water Supply and Sanitation Company Limited (WWSSC) was established under Section 9 (c) Part III of the Water Supply and Sanitation Act No. 28 of 1997 as amended by the Water Supply and Sanitation amendment Act No. 10 of 2005.

The Company was incorporated as a private company limited by shares under the Companies Act Chapter 388 of the Laws of Zambia in 1999 and commenced its operations in 2000.

The Company is owned equally by six (6) local authorities namely; Mongu Municipal, Kaoma, Sesheke, Senanga, Kalabo and Lukulu Town Councils on the Western Province with the primary business to provide water and sanitation services to customers in the said towns. See table 1 below.

Table 1: Share Holding %

No.	Shareholders	Shareholding %
1	Mongu Municipal Council	16.67
2	Kaoma Town Council	16.67
3	Kalabo Town Council	16.67
4	Lukulu Town Council	16.67
5	Sesheke Town Council	16.67
6	Senanga Town Council	16.67
	Total	**100.00**

b. Governance - The Board of Directors

The Company is governed by Board of Directors comprising ten (10) members as detailed below.

i. a Mayor or Council Chairperson from one of the participating Councils;
ii. a Town Clerk or Council Secretary from one of the participating Councils;
iii. the Provincial Local Government Officer or representative;
iv. a representative from the Engineering Institute of Zambia;
v. two (2) representatives from the private sector;
vi. a commercial consumer category representative;
vii. a domestic consumer category representative; and

viii. two (2) members appointed by the Minister, one of whom shall be the Chairperson of the Board.

The board members hold office for a term of not more than three (3) years and are eligible for reappointment upon expiry of their term of office subject to a review of their performance at every annual general meeting but cannot serve for more than two (2) terms.

c. Management

The Managing Director is responsible for the day-to-day operations of the Company and is assisted by four (4) Directors responsible for Finance, Infrastructure Development, Technical and Human Resource and Administration.

d. Sources of Funds

The sources of funds for the Company include, such sums of money as may be raised from its daily operations of water sales, sanitation charges and income generated from various penalties and administrative charges. The Company also receives grants from the Government and Co-operating Partners.

e. Information and Communication Technology (ICT) Systems

During the period under review, the Company operated four (4) software systems as detailed below.

i. Piano System - used for billing;
ii. Sage Evolution Package - used for processing of accounting transactions;
iii. Dove Payroll - used for processing of payroll; and
iv. Baylan System (Bulk SMS) - used for notifying the customers.

16.2 Audit Findings

An examination of financial and other records maintained at Western Water Supply and Sanitation Company headquarters in Mongu and four (4) regional offices in Senanga, Kaoma, Sesheke and Kalabo for financial year ended 31st December 2019 and 2020 revealed the following:

a. Budget and Income

During the period from 1st January 2019 to 31st December 2020, the Company generated income from its operations such as water sales, sanitation services, connection charges in amounts totalling K41,520,734 against a budget of K51,425,817 resulting in a negative variance of K9,905,083. See table 2 below.

Table 2: Budget and Income

Source of Funds	2020		2019		Total	Total	Variance
	Budget K	Income K	Budget K	Income K	Budget K	Income K	K
Billings (Water and Sewer Services)	25,420,798	20,954,183	26,005,019	20,566,551	51,425,817	41,520,734	9,905,083
Other Income	-	-	-	-	-	-	-
Total Revenue	**25,420,798**	**20,954,183**	**26,005,019**	**20,566,551**	**51,425,817**	**41,520,734**	**9,905,083**

In addition, the Company received a total amount of K1,398,666 as Government grants bringing the total income to K42,919,400.

As at 31st December 2020, out of the total income of K42,919,400 amounts totalling K42,537,430 had been spent leaving a balance of K381,970.

b. Governance - Failure to Update Board of Directors at PACRA

Section 100 (1) (a), (b) of Companies Act No. 10 of 2017 stipulates that the Company shall lodge with the registrar notice of a change in the directorship of the company, whether as a result of a director ceasing to hold office or appointment of a new director or both or particulars of a director, such as the name, residential address or other particulars as may be prescribed.

Contrary to the Act, the Company had not updated and lodged in with the registrar of change of directorship of the Company from the time it was incorporated in the year 2000 despite changes in directorship that took place during the period under review.

As at 31st October 2021, the situation had not changed.

c. Operational Performance in the Water and Sanitation Sector

A review of the National Water and Sanitation Council (NWASCO) sector reports in relation to the performance of the Company for the years 2019 and 2020 revealed that the Company's ranking remained at position eleven (11) in 2019 and 2020 out of the eleven (11) water utility companies in the country. The poor ranking was attributed to under performance in operational indicators. In particular, the following were observed:

i. Increase in Non-Revenue Water (NRW)

Non-Revenue Water is the difference between the quantity of treated water distributed in the network and the quantity of water actually billed. NRW consists of technical (leakages) and commercial losses (illegal connections, unbilled customers, wastage on unmetered customers' premises). According to NWASCO standards, the accepted level of NRW was 25% of the quantity of treated water distributed in the network.

However, the Company's NRW was 38% in 2019 and 43% in 2020 which resulted in a cumulative loss of K45,667,374. See table 3 below.

Table 3: Non-Revenue Water

No.	Details	2020	2019	Total
1	Total water production (m3)	5,600,000	6,200,000	11,800,000
2	Total water billed (m3)	2,340,000	2,840,000	5,180,000
3	NRW (m3)	3,260,000	3,360,000	6,620,000
4	NRW (%)	58%	54%	
5	Benchmark (%)	25%	25%	
	Revenue loss on NRW (K)	**24,032,180**	**21,635,194**	**45,667,374**

The NRW above the benchmark deprived the Company of the revenue to help improve its operations during the period under review.

ii. Water Supply Service Coverage

Water Service Coverage is the population serviced by domestic connections only through individual household connections, kiosks, public stand posts and shared taps.

During the period under review, the Company did not reach its strategic goal and sector benchmark of 80% as the water service coverage ranged from 45% to 55%. See table 4 below.

Table 4: Water Supply Service Coverage

Year	Benchmark	Actual Water Service Coverage
2019	80%	45%
2020	80%	55%

Consequently, a large proportion of the community in the province was not covered by the water utility company.

iii. Failure to Meet Metering Ratio Benchmark

Metering ratio is a proportion of the metered connections compared to the total connections. Metering is an important tool with regard to controlling Non-Revenue Water.

During the period under review, the Company reported a low metering ratio of 92% in 2019 and 88% in 2020. The ratio was below the NWASCO benchmark of 100%. This implies that 8% and 12% of the customers in 2019 and 2020 respectively were not metered resulting in the Company losing revenue through wastage on un-metered customers. See table 5 below.

Table 5: Metering Ratio

Year	Metering Ratio	Benchmark	Variance
2019	100%	92%	8%
2020	100%	88%	12%

d. Accounting Irregularities

i. Lack of Audited Financial Statements

Section 265 (1) of the Companies Act No. 10 of 2017 requires that the board of directors should ensure that, within three months following the end of the financial year, an audit is conducted, and the report of the financial affairs is signed by directors.

Contrary to the Act, the Company did not have audited financial statements for the years ended 31st December 2019 and 2020.

As at 30th September 2021, the position had not changed.

ii. Unaccounted for Revenue

Financial Regulation No. 129 (1) of 2006 stipulates that the collectors of revenue are required to bring to account daily the whole amount of their collections.

During the year under review, amounts totalling K6,672,982 were collected at various collection points out of which K3,526,455 was banked resulting in under-banking of K3,526,455. However, the underbanked revenue was unaccounted for in that there were neither deposit slips nor was cash found at hand. See table 6 below.

Table 6: Unaccounted for Revenue

No.	Station	Amount Collected K	Amount Banked K	Unaccounted for Revenue K
1	Mongu	2,986,557	2,090,643	895,879
2	Sesheke	1,806,955	273,846	1,533,109
3	Katima	195,606	16,667	178,939
4	Senanga	1,154,035	318,251	835,784
5	Kaoma	515,193	435,795	79,399
6	Kalabo	14,636	11,290	3,346
	Total	**6,672,982**	**3,146,492**	**3,526,455**

As at 30th September 2021, the funds had not been accounted for.

iii. Irregular Use of Revenue at Source

Section 28 (3) of the Public Finance Management Act No. 1 of 2018 stipulates that a Controlling Officer or an office holder who without reasonable cause fails to deposit public monies received as provided under sub section (1) commits financial misconduct. Further, Financial Regulation No. 121 (1) provides that all moneys received by any accounting officer should be deposited not later than the next business day following the day of receipt.

Contrary to the Act and the Regulation, amounts totalling K106,996 generated from two (2) stations were spent and utilised at source before banking. See table 7 below.

Table 7: Revenue Utilised at Source

No.	Station	Amount Queried K
1	Mongu	97,996
2	Sesheke	9,000
		106,996

iv. Delayed Banking

Financial Regulation No. 121 (1) of 2006 requires that all Government revenues collected be deposited by the following working day. In addition, Section 7 (7.13) of the Company's Financial Policy requires that all amounts received must be banked before 12 hours on the day of receipt; in case of collections received after banking hours, the funds should be banked before mid-day the following day.

Contrary to the regulation and policy, there were delays in banking of revenue collected in amounts totalling K1,326,573 for periods ranging from three (3) to twenty-six (26) days at six (6) stations. See table 8 below.

Table 8: Delayed Banking

No.	Station	Amount Collected K	Amount Banked K	Days Delayed
1	Mongu	530,920	430,995	3 to 6 days
2	Senanga	93,463	93,283	3 to 4 days
3	Katima	103,504	103,501	3 to 12 days
4	Kalabo	60,462	58,957	3 to 6 days
5	Sesheke	288,343	281,462	3 to 9 days
6	Kaoma	566,769	358,374	3 to 26 days
	Total	**1,643,461**	**1,326,573**	

v. Irregular Management of Kiosks Water Sales

Kiosks or public stand posts are public water points used as an alternative mode of service provision where it is not feasible to lay a network for individual connections such as unplanned high density (peri-urban) areas. A scrutiny of the database on kiosks maintained at the Company revealed that the Company operates thirty eight (38) water kiosks in densely populated areas at three (3) stations in Mongu, Katima Mulilo and Senanga. The water kiosks are manned by agents who sell the water on behalf of the Company. See table 9 below.

Table 9: Number of Kiosks

No.	Station	No. of Kiosks
1	Mongu	24
2	Katima	10
3	Senanga	4
	Total	**38**

A physical verification carried out at twenty-six (26) kiosks in August 2021 and enquiries with the community revealed the following;

- **Failure to Collect Revenue from Billed Kiosks**

  During the period under review, the Company billed the Kiosk amounts totalling K201,177 in respect of water sales from three (3) kiosks.

However, as at 31st October 2021, amounts totalling K127,034 were collected leaving a balance of K93,788.

e. Management of Staff and Other Related Matters

i. Failure to Fill Vacant Positions

A review of the Staff Establishment for 2019 and 2020 revealed that the utility Company had a total establishment of 164 approved positions, out of which 140 were filled leaving twenty-four (24) still vacant. The vacant positions included key positions such as the Human Resource and Administration Manager, Financial Accountant, Management Accountant, Quality Assurance Officer and Commercial Services Manager

As at 31st October 2021, the situation had not changed and the key positions remained vacant.

ii. Irregular Employment of Casual Workers

The Employment Act No. 15 of 2015 stipulates that no employer must engage an employee on a casual basis for any job that is of permanent nature. The amended act further defines a casual employee as a person whose employment is not permanent in nature, does not require skill in the performance of their work, whose employment terms require that they are paid at an hourly rate and whose period of employment does not exceed six (6) months. The Act prohibits employers from engaging an employee for a permanent job on casual terms of employment.

However, contrary to the Act, amounts totalling K122,533 were paid as wages to fifty eight (58) workers who had served the Company for periods ranging from one (1) to two (2) years on a temporary basis as casual workers.

As at 30th September 2021, the situation had not changed.

iii. Delayed Removal of Separated Officers from Payroll

Section 20 (7) of the Company's Financial and Administrative Policies requires that employees who are separated from employment by way of resignation, dismissal or discharge should be terminated from the payroll with effect from the date of resignation, dismissal or discharge.

Contrary to the Policy, amounts totalling K66,305 were paid to seven (7) officers who were separated from the Company through death, resignation or dismissal and were retained on the payroll for periods ranging from one (1) to four (4) months.

As at 31st October 2021, the salaries had not been recovered.

f. Procurement of Goods and Services

i. Excess Budget Expenditure on Board Expenses

During the period under review, the Company budgeted to spend an amount of K860,000 on board expenses. However, a review of accounting records revealed that amounts totalling K1,267,377 were spent as board expenses between February 2019 to December 2020 resulting into an excess expenditure of K407,377. See table 10 below.

Table 10: Board Budget Overrun

Year	Approved Budget K	Amount Spent K	Amount Overspent K
2019	430,000	778,024	348,024
2020	430,000	489,353	59,353
Total	**860,000**	**1,267,377**	**407,377**

Included in the amount of the board expenses was a total amount of K237,555 which was spent on sitting allowances for six (6) Board and Committee meetings and one (1) extra ordinary board meeting. However, no minutes of the said meetings were availed for audit rendering the payments questionable.

ii. Unapproved Payments

Financial Regulation of 2006 No. 48 (1), stipulates that the original of a payment voucher shall be signed by a controlling officer, a warrant holder or by any other officers authorised to sign on their behalf.

Contrary to the financial regulation, 131 payments in amounts totalling K1,062,142 were made without being approved by responsible officers.

iii. Missing Payment Vouchers

Financial Regulation No. 65(1) stipulates that payment vouchers with supporting documents, and any other forms which support a charge entered in the accounts, shall be filed, secured against loss, and readily available for audit.

Contrary to the financial regulation, 196 payment vouchers in amounts totalling K1,285,919 processed during the period under review were not availed for audit.

iv. Inadequately Supported Payments

Financial Regulation Nos. 45 and 52 require that all payments by cheque or cash for goods, services and works are supported by cash sale receipts and that vouchers relating to purchases should be supported by an official order and the supplier's invoices.

Contrary to the regulations, 756 payments in amounts totalling K8,669,060 were not supported with relevant documentation such as receipts, invoices and payment requests.

v. Unretired Accountable Imprest

Financial Regulation No. 96 (1) stipulates that accountable imprest should be retired immediately the purpose for which it was issued had been fulfilled.

Contrary to the regulation, accountable imprest in amounts totalling K583,336 issued to eighty (80) officers had not been retired as at 31st October 2021.

vi. Unauthorised Travel Abroad

Cabinet Office Circular No 14 of 2013 states that Controlling Officers are required to seek prior authority from the Office of the Secretary to the Cabinet for all Public Service officers travelling on duty outside Zambia. Further, the Permanent Secretary, Ministry of Water Development, Sanitation and Environmental Protection in his minute No. MWDSEP/ dated 15th December 2017 reminded Managing Directors of Commercial Water Utilities (CUs) to seek authority from his Office when travelling abroad.

Contrary to the above guidelines, amounts totalling K24,991 were spent on eight (8) officers who travelled abroad in 2020 without authority.

vii. Irregular Issuance of Imprest

Ministry of Finance Treasury and Financial Circular No.1 of 2020 guided Controlling Officers that no cash should be withdrawn for payment of subsistence allowances, fuel refunds and any other allowances as these should be paid directly into the beneficiary's account.

Further, Financial Regulation 86(c) states that accountable imprest is imprest that is issued as payment to facilitate the purchase of goods and services whose value cannot be ascertained at the time.

- **Allowances and Personal Related Payments**

  Contrary to the circular, imprest in amounts totalling K180,633 involving seventeen (17) transactions was issued to ten (10) officers to facilitate payments of allowances, electricity units, refreshments, funeral grant and talk time to officers and suppliers instead of paying directly into the beneficiary's account.

- **Procurement of Goods and Services**

  Contrary to the financial regulation, accountable imprest in amounts totalling K303,035 was issued to ten (10) officers to procure goods and services whose values were readily obtainable and available on the markets.

viii. Misapplication of Funds - Muoyo Project

Section 49 of the Public Finance Management Act No. 1 of 2018 stipulates that a controlling officer or controlling body to whom power or duty is assigned, commits an act of financial misconduct if that controlling officer or controlling body willfully or negligently makes or permits an unauthorized, irregular or wasteful expenditure or misapplication of funds or by an act or omission, causes the theft of public funds, public stores or public property.

Contrary to the Act, amounts totalling K579,949 received for Muoyo Project were misapplied on administrative activities such as allowances, salaries, fuel and procurement of goods, activities not related to the project.

g. Management of Stores

i. Unaccounted for Assorted Stores

Public Stores Regulation No. 16 requires that every stores officer or any other officer having in his charge any public stores or other articles of public property must keep and maintain record of receipt and issue of such public stores.

Contrary to the regulation, stores costing, K2,565,168 (general stores - K1,746,229 and fuel - K818,939) purchased during the period under review were unaccounted for in that there were no receipt and disposal details.

ii. Questionable Drawing of Fuel by Private Vehicles

During the period under review, fuel and lubricants costing K170,617 was drawn by vehicles that did not belong to the Company. Further, there was no documentation to authorise the vehicles to draw fuel from the account.

h. Management of Assets

i. Undelivered Engine

On 27th August 2019, an amount of K35,000 was paid to Ideal Genuine Truck and Car Parts through a bank transfer on payment voucher No. 195113 for the procurement of a complete engine 4M40 for Mitsubishi Pajero Registration No. ABR 634.

However, as at 3rd September 2021, the procured engine had not been delivered.

ii. Failure to Secure Title Deed

Section 41(4) of the Public Finance Management Act No. 1 of 2018 requires Controlling Officers to ensure that all public properties under their charge are secured with title deeds.

Contrary to the Act, as at 30th September 2021, the Company had not secured title deeds for parcels of land where infrastructure such as office buildings, water treatment plants as well as water well fields and storage tanks valued at K38,987,055 were located.

i. Failure to Withhold Tax on Rentals

Section 82a (1c) of the Income Tax Act No. 3 of 1997 requires that every person or partnership making a payment of rent from a source within the Republic must before making any other deduction deduct tax from the payment.

Contrary to the Act, the Company paid various landlords without withholding tax from rentals in amounts totalling K60,510 for its Regional and Provincial office in Mongu.

j. Failure to Remit Statutory Obligations

Income Tax Act Chapter 232 of Laws of Zambia requires Pay As You Earn (PAYE) be deducted from officers' emoluments and remitted to the Zambia Revenue Authority.

Clause 14 (1) of the National Pensions Scheme Act No. 40 of 1996, stipulates that a compensating employer shall pay to the scheme a contribution in respect of an employee in his or her employment consisting of employers contribution and the employee contribution at the prescribed percentage.

Contrary to the Acts, the Company had an outstanding total amount of K21,973,876 in statutory and other obligations. See table 11 below.

Table 11: Failure to Remit Statutory Obligations

No.	Details	Amount K
1	ZRA	11,818,090
2	NAPSA	9,761,782
3	WCFCB	337,405
4	Mongu Council	56,600
	Total	**21,973,876**

CONCLUSION

This report has highlighted various areas of weaknesses in the management of water utility companies. The major weaknesses were in corporate governance, operational performance (under performance in critical areas namely; water production, service coverage for water and sanitation and water quality), preparation of financial statements, contract management and financial performance.

It is important that these weaknesses are addressed to enable the companies meet their mandates of providing water and sanitation services to the populace and attain Sustainable Development Goal (SDG) No. 6 on provision of clean water and sanitation.

RECOMMENDATIONS

To address the weaknesses identified in this report, I recommend the following:

i. The appointing authority must always ensure that the water utility companies have functional Boards of Directors to provide effective strategic oversight.

ii. The Board of Directors must ensure that financial reports are prepared annually in compliance with the Company's Act Chapter 338 of the Laws of Zambia.

iii. The Board of Directors must ensure that a performance assessment system for management is effectively implemented.

iv. The water utilities should improve the efficiency in the provision of their services by way of meeting the operational benchmarks provided by NWASCO. This will help in attaining Sustainable Development Goal (SDG) No. 6 on provision of clean water and sanitation.

v. The water utility companies should devise a recapitalization plan to improve their infrastructure in order to enhance their operations.

vi. Management must ensure that funds raised from the sanitation surcharge are utilised for the purposes of implementing sanitation projects.

vii. The responsible ministry for the sector must ensure that contract management is enhanced particularly in the areas of funding and supervision.

viii. The water utility companies must develop an effective debt management system by ensuring that outstanding bills from consumers are settled in order to improve their liquidity positions.

ix. Management of the water utilities should address the internal control weaknesses identified in this report to enhance systems and protect assets.