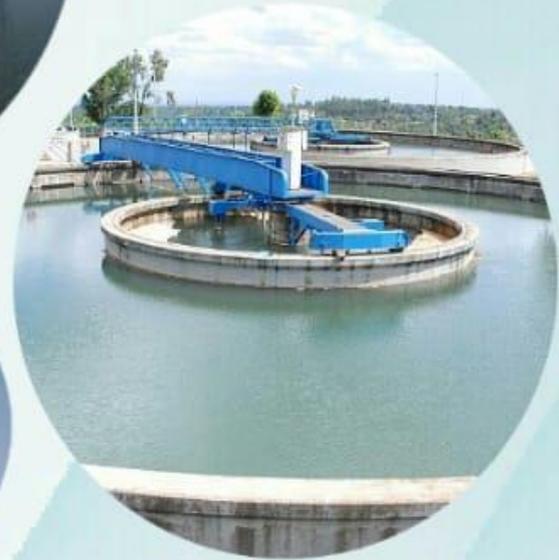




# Nairobi City Water and Sewerage Company Limited



## STRATEGIC PLAN 2019/20 - 2023/24



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## FORWARD-FROM CHAIR OF THE BOARD

As we are all aware, the fourth schedule of the 2010 Constitution of Kenya details the functions that are spearheaded by both the National and County Governments. In this regard therefore, provision of water and sanitation services, further as provided in clause five of 2012 County Government Act, is one of the functions of County Governments and Nairobi City County (NCC) has appointed Nairobi City Water and Sewerage Company (NCWSC) as its sole agent for this purpose in tandem with clause 6 (2) (c) of the said Act and Water Act 2016 section 77. NCWSC is a key player in enhancing service delivery in the county's endeavour of making Nairobi 'the city of choice to invest, work and live in'. Water and Sanitation services are critical ingredients for realization of this County's Vision and long-term 2015 – 2025 Strategic Plan, Medium Term 2018 – 2022 County Integrated Development Plan (CIDP) and the Annual Development Plans.

At the county level, NCWSC is a key player for Kenya to realize Sustainable Development Goal No. 6 and Vision 2030's target of universal water and sanitation coverage by the year 2030 besides big 4 agenda of the government. According to the latest 11th impact report that reviews sub-sector's performance in 2017/2018, released by Water Services Regulatory Board (WASREB), out of estimated population of 4.39 million in the city, the Company serves 3.5 million which translates to 80% water coverage. This is 27% of the total 12.9 million people served by the 86 regulated public water utilities. The Company's 585,000 water and sewer connections account to about 29% of the total sub-sectors about two million connections while its KShs. 8.5 billion annual revenue represent 43% of total sub-sector revenue of KShs. 19.8 billion.

This 5<sup>th</sup> strategic plan for the period 2019/20-2023/24 marks the bold journey NCWSC is committed to take in its endeavour to ensure enhanced provision of adequate water and sanitation services for all within the county in collaboration with other stakeholders in the sector. The 80% overall achievement despite numerous challenges encountered during the implementation of the 4<sup>th</sup> strategic plan which run from 2014/15 to June 2018/2019 sets the basis for improved performance and realization of key strategic goals and objectives as identified under various themes and programs in the 5<sup>th</sup> Strategic Plan.

I wish to confirm the Board of Directors' commitment to continuously improving the quality of service delivery in Nairobi City to the delight of our customers through full support of the implementation of the 5<sup>th</sup> Strategic Plan. On behalf of the Board of Directors and the entire staff of the Company, I request for full support from all stakeholders including all members of staff, management, Development Partners, NCCG, our esteemed customers, and suppliers amongst others in delivery of the new strategic plan 2019-20/2023/24.

**God Bless NCWSC, God Bless Nairobi City County, God bless Kenya.**

**Madam Beryl Lilian Okumu**  
**CHAIRPERSON, NCWSC's BOARD OF DIRECTORS**



## MANAGING DIRECTORS MESSAGE

In pursuit for enhancing its mandate of providing quality water and sanitation services in Nairobi City County and its environs, NCWSC has been formulating strategic plans to guide its operations. Since its inception in Dec. 2003, the Company commenced with two, three-year Strategic Plans covering financial years 2004/5 to 2006/07, and 2007/8 to 2009/10, followed by two, five-year Strategic Plans which covered period 2010/11 to 2014/15 and the just concluded one running from July 2014 to June 2019. The successive strategic plans were developed through a participatory approach which ensured views of the key stakeholders were incorporated for wider acceptance, ownership and implementation.

All the above four Strategic Plans were grounded and aimed at actualization of United Nations development goals aspirations (Millennium development goals and Sustainable Development Goals), the current National Government economic blue print (Vision 2030), the National Water Strategy and in pursuit of fulfilling both legal and regulatory water sector requirements under Water Act 2016.

The 80% overall achievement of the 4th Strategic Plan 2015/16- 2018/9 strategic goals and objectives at an estimated cost of KES. 42 billion is a clear demonstration of goodwill and commitment by all stakeholders in support of NCWSC in pursuit of its mandate. This 5<sup>th</sup> strategic plan with an estimated budget of KES 242 billion, demonstrates our continued commitment in delivery of high quality and reliable services through development of key vital infrastructures and facilities necessary to support full implementation of the strategic plan as detailed in the **seven** thematic areas.

I wish to recognise the invaluable contribution from KIWASH(USAID) who supported the entire process from the beginning, members of the Strategic Plan Development Committee, Board of directors, the entire staff and management, the consultants as well as the Nairobi City County Government representatives for their valuable input into the 5<sup>th</sup> strategic plan.

I look forward to successful implementation of the 5th Strategic Plan with the invaluable stewardship of the Board of Directors and continued support from all our internal and external stakeholders.

**ENG. NAHASON MUGUNA**  
**NCWSC's ACTING MANAGING DIRECTOR**

## EXECUTIVE SUMMARY

Nairobi City Water and Sewerage Company (NCWSC) was incorporated in December 2003 under the Companies Act cap 486. It is a wholly-owned subsidiary of Nairobi City County with the main responsibility of providing and managing water and sewerage services in Nairobi, while the asset holding body, Athi Water Works Development Agency (AWWDA) is charged with the responsibility of developing key water and sewerage infrastructure.

The Company is mandated to provide clean water and sewerage services to the residents of Nairobi City County, in a financially sustainable manner and within Government regulations. The City has an estimated population of 4.39 million by 2019 which is projected to grow to 5.9 million by 2022 according to Nairobi County Integrated Development Plan (CIDP) 2018-2022.

As the mandated water and sewerage service provider in Nairobi City County, NCWSC has continued to enhance service provision by aligning itself to the following key documents: Constitution of Kenya 2010; National Water Master Plan 2030 developed in 2013 by the Government of Kenya, identifying key multisectoral initiatives and projects to ensure sustainable availability and management of water and sanitation for all; Kenyan economic blueprint, Vision 2030's under MTP III; Nairobi Integrated Urban Development Masterplan (NIUPLAN); the County's Strategic Plan (2015-2025); Nairobi County Integrated Development Plan for (2018-2022); and Agenda 2030, the Sustainable Development Goals under agenda six.

This strategic plan sets NCWSC on a strategic path aimed at improving service delivery. It gives the strategic direction, goals and objectives for the Company with a clear roadmap for achieving them.

In developing this strategic plan, a participatory and all-inclusive approach was adopted that entailed interviews, review of various documents, staff consultations, workshops with the planning committee (SPDC) and management staff, and review of feedback from internal and external stakeholders. A detailed review of past performance was undertaken to identify key gaps and lessons learnt that the new plan should take into account. A structured situational analysis was also undertaken to assess the internal and external operating environment for the Company.

To enhance the Company's performance and impact of its services, as well as ensure growth and sustainability the following themes were identified for the 5<sup>th</sup> Strategic Plan; Water Sources, Treatment, Transmission and Distribution; Waste Water Networks, Conveyance and Treatment; Non-Revenue Water Management; Customer Focus and Stakeholder Engagement; Governance and Institutional Capacity Development; Information & Communication Technology (ICT) and other Support Infrastructure; and Financial Stewardship.

For each theme, strategic goals, support activities, expected output, responsible actor, and inherent costs were identified and detailed in the implementation matrix.

The total resource requirements for the plan period is KES 242.13 billion comprising of total themes requirements of KES 185.62 billion (with KES 19.11 billion being funded internally and KES 166.5 funded externally through other Development Partners), Recurrent and Capital Expenditure KES 53.09 billion, and Repayment of Development Loans (KES 3.4 billion).

To enhance financial sustainability, NCWSC envisage an upward tariff review by December 2020 to supplement the sources of funds for the projects in the envisaged plan period. Additionally, given the structure of the Company, enhancing institutional capability to deliver effectively and efficiently through enhancing staff welfare, competence and skills as well as upgrading the infrastructure at the Company are critical for the achievement of the plan.

To aid in tracking the NCWSC performance and key service delivery standards as required by the industry regulator, this plan has an elaborate Monitoring, Evaluation, Reporting and Learning (MER&L) framework tool. While assessing the performance of the Company, the tool will take into consideration the following sector benchmarks; water and sewer coverage, hours of supply, operation and maintenance cost coverage, revenue collection efficiency, non-revenue water, personnel expenditure as a percentage of operation and maintenance costs, drinking water quality, staff productivity and metering ratio.

The new plan is focused on the growth and sustainability of the Company driven by the goodwill from the Nairobi City County Government and the National Government; support from the BOD and management; and commitment by the staff.

## ABBREVIATIONS AND ACRONYMS

AfWA	African Water Association
AMR	Automatic Meter Reading
AWWDA	Athi Water Works Development Agency
BoD	Board of Directors
BoM	Board of Management
CSR	Corporate Social Responsibility
CBOs	Community Based Organizations
DHRAS	Director of Human Resource and Administration
DMS	Database Management System
DN	Diameter Nominal
EIA	Environmental Impact Assessment
EMS	Environmental Management System
ERS	Economic Recovery Strategy for wealth & employment creation.
FY	Financial Year
GIS	Geographic Information System
GDP	Gross Domestic Product
GMR	Global Monitoring Report
HR	Human Resource
HRM	Human Resource Manager
HOD	Head of Department
ICT	Information Communication Technology
ISO	International Organization for Standardization
IWA	International Water Association
KARA	Kenya Alliance of Resident Associations
KEBS	Kenya Bureau of Standards
KeNHA	Kenya National Highways Authority
KEPSA	Kenya Private Sector Alliance
KFS	Kenya Forest Service
KIWASH	Kenya Integrated Water, Sanitation and Hygiene
KM	Kilometer
KPI	Key Performance Indicator
KRA	Kenya Revenue Authority
LIMS	Laboratory Information Management System
MD	Managing Director
MER&L	Monitoring, Evaluation, Reporting & Learning
MT	Meter Testing
MFA	Multi Factor Authentication
NCWSC	Nairobi City Water and Sewerage Company
NEMA	National Environment Management Authority
NIUPLAN	Nairobi Integrated Urban Development Masterplan
NCCG	Nairobi City County Government
NCA	National Construction Authority



NGO	Non-Governmental Organization
NRW	Non-Revenue Water
OBA	Output Based Aid
PESTLE	Political, Economic, Social, Technological, Legal and Environmental
PDS	Privately Developed Sewers
PMED	Planning Monitoring and Evaluation Department
PPP	Polluter Pay Principle
PPRA	Public Procurement Regulation Authority
QMS	Quality Management System
R&D	Research and Development
SDGs	Sustainable Development Goals
SPIC	Strategic Plan Implementation Committee
SPDC	Strategic Plan Development Committee
SP	Strategic Plan
SWOT	Strengths, Weaknesses, Opportunities and Threats
TEMS	Trade Effluent Management System
USAID	United States Agency for International Development
WAG	Water Action Group
WARREC	Water Research Resource Centre
WRA	Water Regulatory Authority
WASPA	Water Service Providers Association
WaSREB	Water Services Regulatory Board
WATSAN	Water and Sanitation
WHO	World Health Organization
WRUA	Water Resources Users Association
WSPs	Water Safety Plans/Water Service Provider(s)
WWTPs	Waste Water Treatment Plants

## PART I

### 1.0 INTRODUCTION

#### 1.1 Background

Nairobi City Water and Sewerage Company (NCWSC) was incorporated in December 2003 under the Companies Act cap 486. It is a wholly-owned subsidiary of Nairobi City County. The mandate of NCWSC is to provide clean water and sewerage services to the residents of Nairobi County, in a financially sustainable manner and within Government regulations. The City has an estimated population of 4.39 million by 2019 (Kenya National Bureau of Statistics, 2019) which is projected to grow to 5.9 million by 2022 according to Nairobi County Integrated Development Plan (CIDP) 2018-2022.

Access to affordable water and sanitation services is a basic human right for both domestic and commercial use. At the global level, the sixth Sustainable Development Goal (SDG) is to ensure availability and sustainable management of water and sanitation for all, and have universal access to safe and affordable drinking water by 2030 by all. Kenya Constitution (2010) guarantees access to reasonable standards of sanitation, clean and safe water in adequate quantities to all Kenyans. The Constitution has made provisions on legislative, policy and implementation framework at national and country levels. The National Water Master Plan 2030 developed in 2013 by the Government of Kenya, identifies key multisectoral initiatives and projects to ensure sustainable availability and management of water and sanitation for all. The National Government spearheads the development of key infrastructures while the County Governments are responsible for the provision of water and sanitation services as detailed in the fourth schedule of Constitution of Kenya 2010.

The Kenyan economic blueprint; Vision 2030's under MTP III; Water and Sanitation (WATSAN) sub-sectors goals, have identified sustainable access to safe water and basic sanitation to all Kenyans by 2030 as one of the key priority objectives. More so, water and sanitation services have been identified as key enablers of the Big Four Agenda currently being pursued by the National Government namely; Food Security, Universal Health Care, Affordable Housing and Manufacturing

and Value Addition. NCWSC has aligned itself with the Nairobi Integrated Urban Development Masterplan (NIUPLAN), the County's Strategic Plan (2015-2025) and Nairobi County Integrated Development Plan for (2018-2022).

NCWSC has the main responsibility of providing and managing water and sewerage services in Nairobi City and its environs, while the asset holding body, Athi Water Works Development Agency (AWWDA) is charged with the responsibility of developing key water and sewerage infrastructure. The national water regulator, Water Services Regulatory Board (WaSREB) provides operations guidelines and service standards to all County Government's WSPs including NCWSC. The Company is regulated by WaSREB just like other WSPs on service delivery standards and water quality. The Company continues to collaborate with other Community-Based Organizations (CBOs) and Non-Governmental Organizations (NGOs) operating within its jurisdiction to provide some of the water and sanitation services in the Informal Settlements.

The main sources/treatment plants of water for the residents in Nairobi County are from Thika Dam (Ndakaini Dam) in Muranga County, Sasumua Dam in Nyandarua County, Kikuyu Springs, Ruiru Dam and Ngethu and Kabete Water Works. Some residents use borehole water, water kiosks especially those in slums, wells and roof catchments to supplement water supply from NCWSC. According to the Sector Impact report 11 2019 by WaSREB, over 80% of the Nairobi residents have access to piped water treated from these Water Works.

The main rivers in the County are Nairobi River, Ngong River and Kabuthi River. Although Nairobi River is permanent, its water is unsafe for human consumption. The Company, however, has several other water reservoirs namely; Kenyatta University, Gigiri, Kabete, Kiambu, Uthiru, Dagorreti, Wilson Airport, Embakasi, Hill Tank, Kasarani, Outering Road tower, Karura, and Loresho tower.

## 1.2 Rationale for Strategic Planning

Strategic planning is an organisational development tool that produces fundamental decisions and actions that shape and guide what an organization is, what it does, and why it does it. It requires broad-scale information gathering, an exploration of alternatives, and an emphasis on the future implications of present decisions.



Strategic planning is the process of developing and analyzing the organization's vision, mission, overall goals, general strategies, and allocating resources. It charts out the course of action required to achieve long-term goals of the organization. Goals focus on desired changes that the organization is committed to achieve. They are the ends that the organization strives to attain. Thus, the strategic plan involves adapting the organization to take advantage of opportunities in its constantly changing environment. NCWSC fully embraces this principle hence this strategic plan seeks to consolidate and scale up achievements of the preceding ones. Further, Strategic planning provides a mechanism for interfacing organizational plans, goals, objectives and activities with those of key stakeholders and other relevant key institutions in the sector both at the county and national level.

### 1.3 Objectives of the Strategic Plan

This strategic plan is expected to provide NCWSC with a renewed and revitalized pathway that is aimed at consolidating its current gains, utilizing new innovative ways and breaking new grounds to build and expand its horizons in providing information and direction in the implementation of its mandate. The strategic plan will help the Company achieve its mandate through;

- Providing a strategic direction and focus with regard to the changing demographics of its customers.
- Positioning the organization strategically in relation to the dynamics of the internal and external environment.
- Providing a rational framework for effective governance and management.
- Charting a rational course for organizational growth and development.
- Providing an enhanced framework for optimal utilization of NCWSC resources including human capital.

This strategic plan will shape NCWSC's thematic focus, administrative and financial direction and resource utilization.

## PART II

### 2.0 INSTITUTIONAL REVIEW

#### 2.1 Introduction

Nairobi City Water and Sewerage Company (NCWSC) was incorporated in December 2003 under the Companies Act cap 486. It is a wholly-owned subsidiary of Nairobi City County. Its headquarters are in Nairobi, Kampala Road, Industrial Area and has its area of jurisdiction divided into seven administrative regions, namely: Northern, Eastern, North Eastern, Central, Southern, Western and Informal Settlements which are further devolved into 28 zones.

In accordance to the provisions of Water Act 2016, NCWSC is responsible for the efficient and economical provision of water services and the development of county assets for water service provision and may provide water services outside its jurisdiction as may be guided by the water regulator (WaSREB). The Act also provides for NCWSC to receive faecal and industrial effluent into its sewerage system and ensure that it has in place measures for the receipt and handling of the effluent without; causing pollution of the environment; harm to human health; damage to the sewerage system: or contravening any applicable laws or standards set by the WaSREB and NEMA. The mandate of the Company is to provide clean water and sewerage services to the residents of Nairobi County, in a financially sustainable manner and within the Government regulations.

The City has an estimated population of 4.39 million (Kenya National Bureau of Statistics, 2019) and projected to grow to 5.9 million by 2022 according to County Integrated Development Plan 2018-2022. According to the United Nations population estimates and projections of major Urban Agglomerations (World Urbanization Prospects, 2018), Nairobi is projected to have 7million by 2030 and 8.5 million by 2035. The suburb areas located within the County and the surrounding counties are also projected to grow both in terms of development projects and populations. NCWSC not only serves Nairobi county but also some parts of the neighbouring counties such as Mavoko in Machakos and Kiambu Counties.

## 2.2 NCWSC's Mandate, Mission, Vision & Core Values

### 2.2.1 Mandate

The mandate of the Company is to provide water and sewerage services in Nairobi City County, in a financially sustainable manner and within the Government regulations.

### 2.2.2 Mission Statement

The mission statement of NCWSC is *"To provide reliable quality water and sewerage services in a sustainable environmentally friendly manner that delights customers within Nairobi City County."*

### 2.2.3 Vision Statement

NCWSC strategic vision is *"To be a world class provider of water and sewerage services."*

### 2.2.4 Core Values

The guiding core values that NCWSC endeavor to put into practice while performing its functional obligations include the following:

- i) Accountability
- ii) Customer Focus
- iii) Commitment
- iv) Creativity and Innovation
- v) Integrity
- vi) Professionalism
- vii) Teamwork

## 2.3 Governance Structure

NCWSC is governed by the Board of directors who provide overall leadership and oversight of the Company operations. The Board is composed of 11 members appointed by the Nairobi City County Government. To effectively discharge its mandate, the board has the following Board committees;

- Human Resource, Administration and Communication Committee
- Audit, Risk and Governance Committee
- Technical, Commercial and ICT Committee

- Finance Committee

The Managing Director is the chief accounting officer of NCWSC, he sits in BoD and represents the organization in the exercise of its legal personality. He provides overall leadership and chairs the Board of Management which comprises all heads of directorates of the Company, namely;

- MD's Directorate
- Technical Directorate
- Commercial Directorate
- Finance and Strategy Directorate
- Directorate of Human Resource and Administration
- Information Communication and Technology Directorate
- Company Secretary and Legal Services Directorate
- Internal Audit and Risk Management Directorate

The current Company structure features several duty stations with the following staffing levels;

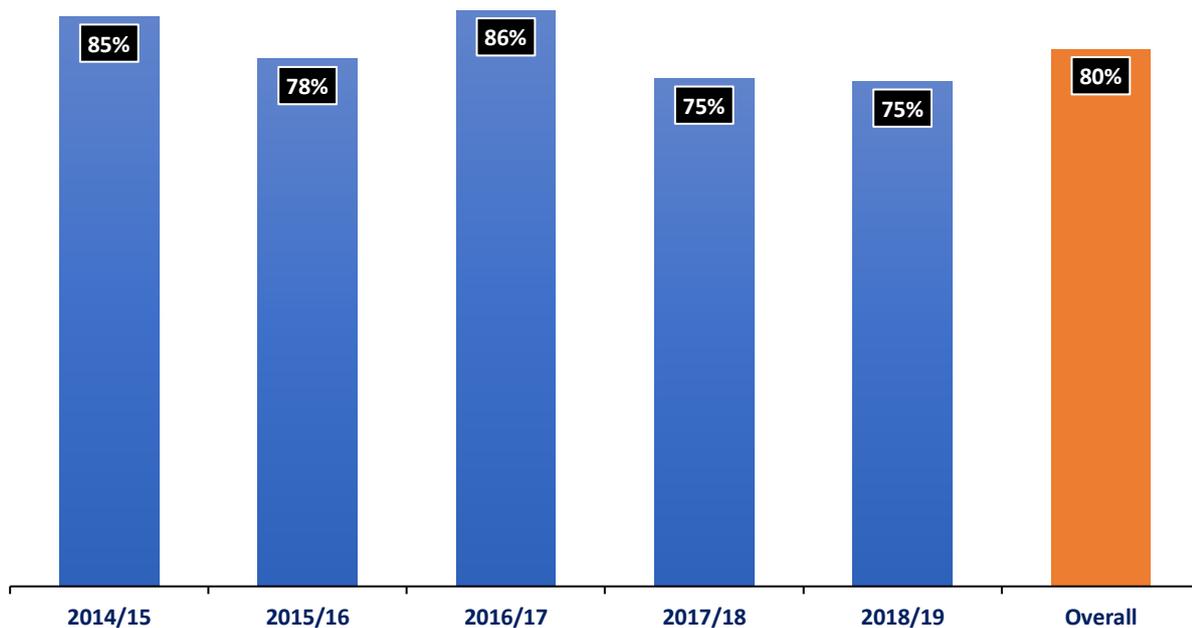
		Grade									
	Duty Station	1	2	3	4	5	6	7	8	9	Total
1	Central Region			1	4	15	44	45	112	7	228
2	Eastern Region			1	5	19	65	62	166	5	323
3	Gigiri Pumping Station					1	3	11	10	1	26
4	Informal Settlement Region				7	16	33	28	113	8	205
5	Kabete Laboratory			1	3	3	8	9	15	2	41
6	Kabete Treatment Works				1	5	21	24	31	4	86
7	Kampala Rd-HQ		5	26	63	90	179	164	420	30	977
8	Kariobangi S.T.W.				1	1	13	16	21	2	54
9	Ngethu Water Works			1	3	3	22	33	56	7	125
10	North-Eastern			1	3	19	58	62	158	22	323
11	Northern Region				6	15	59	50	153	11	294
12	Ruai				1	4	13	44	25	1	88
13	Ruiru Dam				1	1	8	18	14		42
14	Sasumua Dam				1	2	14	24	40	6	87
15	Southern Region			1	7	11	43	65	113	4	244
16	Thika Dam				1		8	6	37		52
17	Western Region			1	4	15	41	51	127	6	245
	Total	0	5	33	111	220	632	712	1611	116	3440

Table 1: Staff Establishment as at 30<sup>th</sup> June 2019

## 2.4 Performance Analysis

The Company has had previous strategic plans guiding its operations including the just-concluded fourth strategic plan for 2014/15- 2018/19. This fourth strategic plan identified eight thematic focus areas namely; Enhanced and sustainable quality water sources, production and storage; Optimized transmission and equitable distribution of quality water; Reduction of Non-Revenue Water; Wastewater management; Revenue growth and customer loyalty; Financial stewardship; Human resource management; Brand equity and institutional strengthening at an estimated cost of Kshs 42 billion over and above the regular operations expenditure required to implement the strategic plan. From the evaluation of the implementation of the fourth strategic plan, NCWSC managed to achieve 80% of implementation of the plan as illustrated below. Detailed implementation status for the various activities are as detailed in annex 1;

**Figure 1: 4th SP Implementation Status**



### 2.4.1 Water and Sewer Infrastructure

The Company continues to focus on ensuring everybody has access to adequate and quality water and sanitation services in accordance with SDG six, Vision 2030 goal and the Constitution in line with

the national government and County Government priorities and big four agenda. The Company at the end of the 4<sup>th</sup> plan recorded coverage of 80% for water and 50% for sewerage coverage.

To enhance water coverage, the Company extended and rehabilitated 77 KM of water pipelines in formal areas, and laid 80 Km of water lines and constructed 18 No water kiosks in the Informal Settlements in the same plan period through funds generated internally as well as partnerships and collaboration with other players in the sector including Development Partners.

On sewer management, the Company laid 62 KM of sewer lines (36 km in the informal and 26 km in the Formal Settlements) and constructed forty-one (41) ablution blocks and 8,545 pour-flash converted and connected into sewer system in the Informal Settlement.

The water and sewer infrastructure during the past strategic plan as shown in the table below;

Water and Sewer Infrastructure			Actual Annual Performances					5 YEAR CUMULATIVE PERFORMANCE		
	Units of Measure	2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	Actual Cumulative Performance	Plan Period Target	% perf.	
1	Length of water pipelines extended in Formal areas	KMs	7	5	3	11	7	32	60	53%
2	Length of water pipelines rehabilitated in Formal areas	KMs	4	6	24	4	6	45	352	13%
3	Length of water lines laid in Informal Settlements	KMs	17	17	17	12	18	80	300	27%
4	Water connections in Informal Settlements under OBA Project	No.	166	1,200	3,073	5,015	2,615	12,069	20,000	60%
5	No. of water kiosks constructed in Informal Settlements	No.	8	6	2	1	1	18	50	36%
6	No. of public prepaid meter installation in Informal Settlements	No.	4	200	97	34	53	388	200	194%
7	Length of sewers laid in Formal areas	KMs	3	5	4	10	4	26	50	52%
8	Length of sewers laid in the Informal Settlements	KMs	10	3	11	7	5	36	50	73%
9	No of ablution blocks constructed in the Informal Settlements	No.	32	3	3	1	2	41	52	79%
10	Pour-flash converted into sewer system connections in the Informal Settlements under OBA project	No.		1,227	2,611	3,422	1,285	8,545	8,613	99%

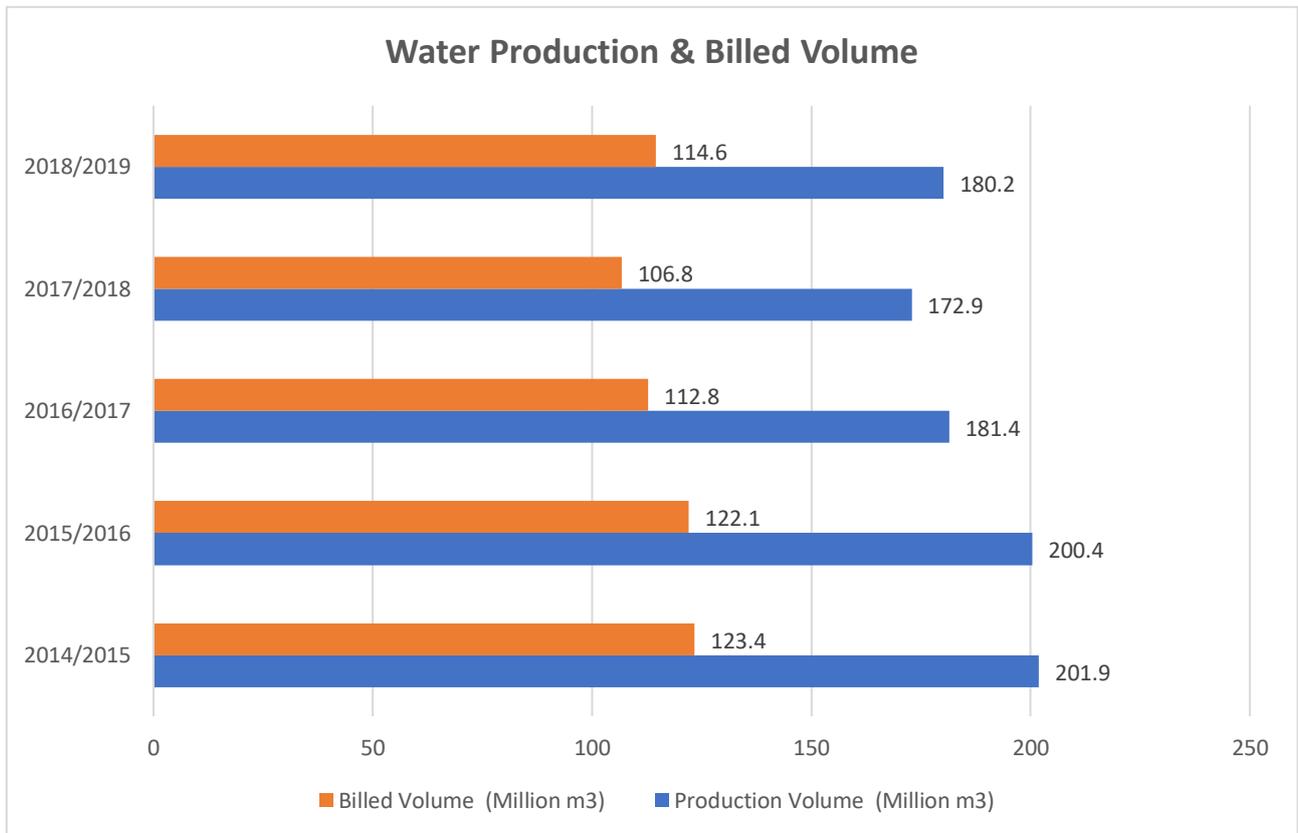


**Table 2: Water and Sewer Infrastructure**

**2.4.2 Water Production**

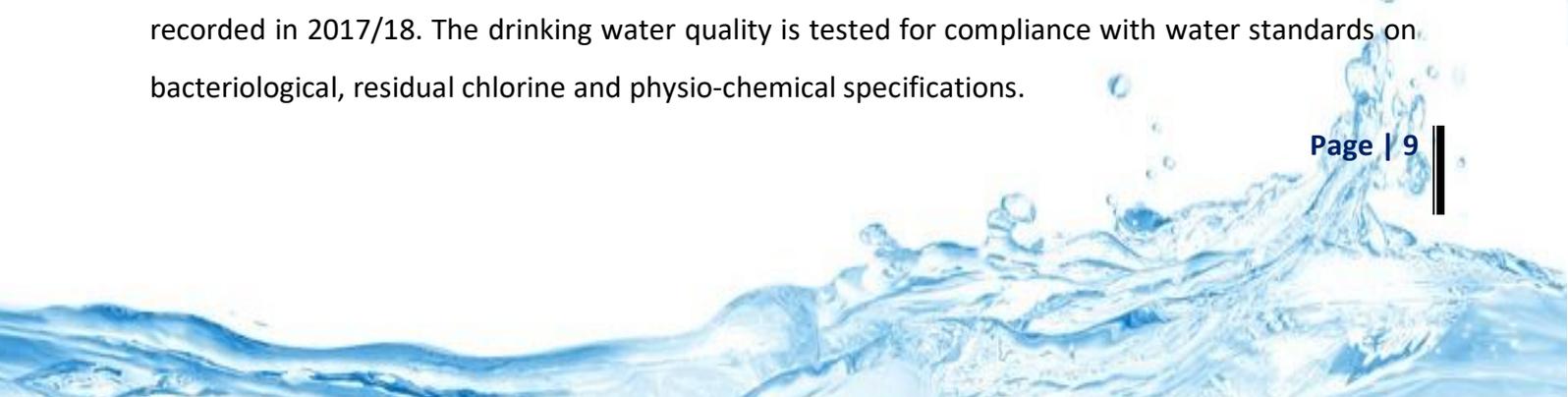
The Company produced 201.8 million M<sup>3</sup> of water in the financial year 2014/15 against sales of 124.7 million M<sup>3</sup> of water which declined to 180.1 million M<sup>3</sup> of water produced against sales of 114.5 million M<sup>3</sup> of water in the financial year 2018/19. The performance over the period is shown in the figure below;

**Figure 2: Water Production vs Sales Volume (million M<sup>3</sup>)**



The drop-in production was majorly attributed to changes in climate and erratic rainfall due to prolonged drought in the year 2016 and 2017. In 2018/19, the non-revenue water from physical and commercial losses was at 36.4% against the recommended sector target of 25%.

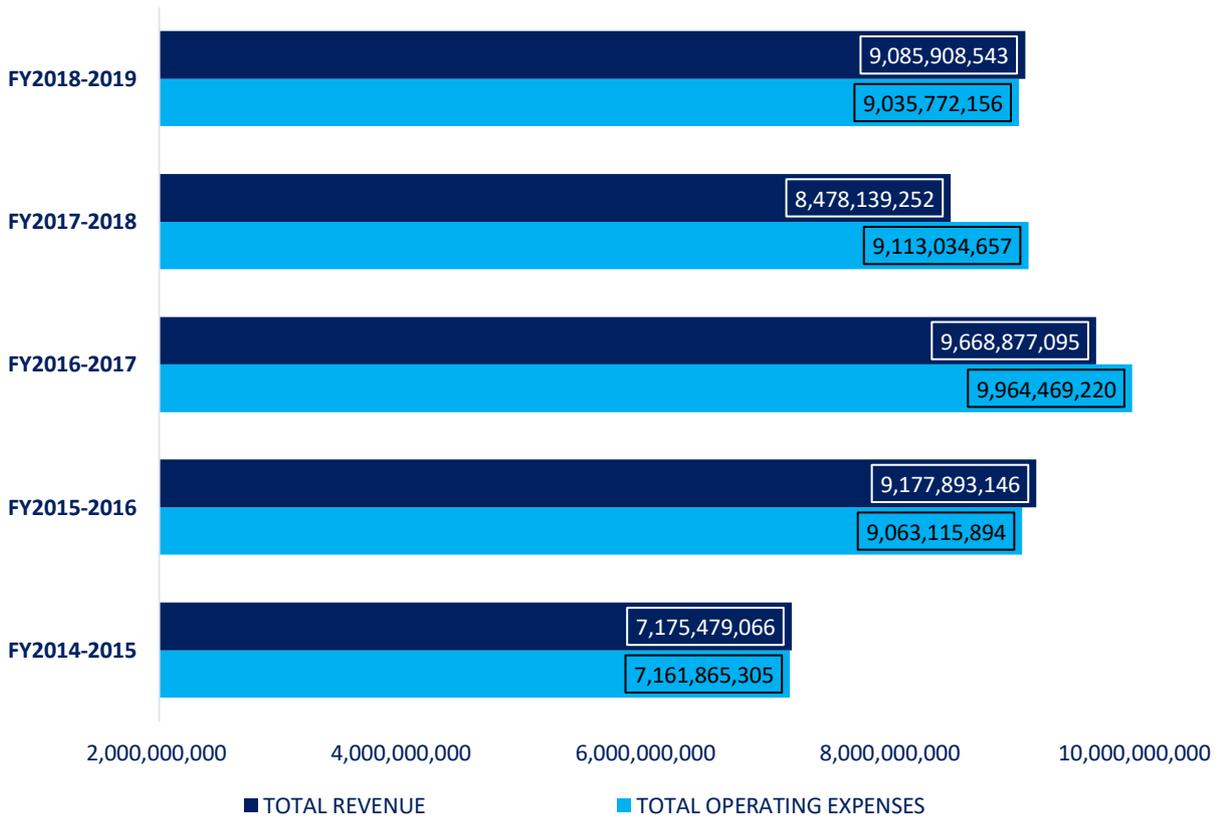
As of 2018/19 financial year, drinking water quality was estimated at 98% improvement from 93% recorded in 2017/18. The drinking water quality is tested for compliance with water standards on bacteriological, residual chlorine and physio-chemical specifications.



### 2.4.3 Financial Performance

A review of NCWSC’s financial reports showed a marginal surplus in 2014/15 and 2018/19. The Company reported deficits in the financial years 2015/16, 2016/17 and 2017/18 due to a drop in water production attributed to erratic weather patterns despite a tariff review in 2015/16.

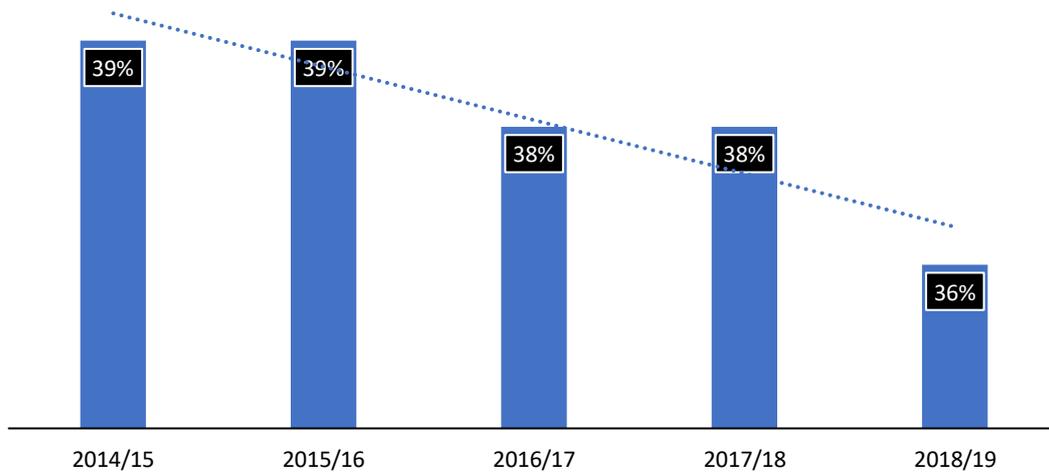
Figure 3: NCWSC Financial Performance (KES)



### 2.4.4 Non- Revenue Water

To address non-revenue water the Company has been pursuing various strategies and mechanisms in the past. From the assessment carried out, the non-revenue water has been improving over the years, despite the recommended sectoral level of 25%. The Company however dedicated its resource and through a concerted effort managed a 36.4% against the internal annual target of 33% at the end of plan period as illustrated below;

Figure 4: NRW Reduction (%)



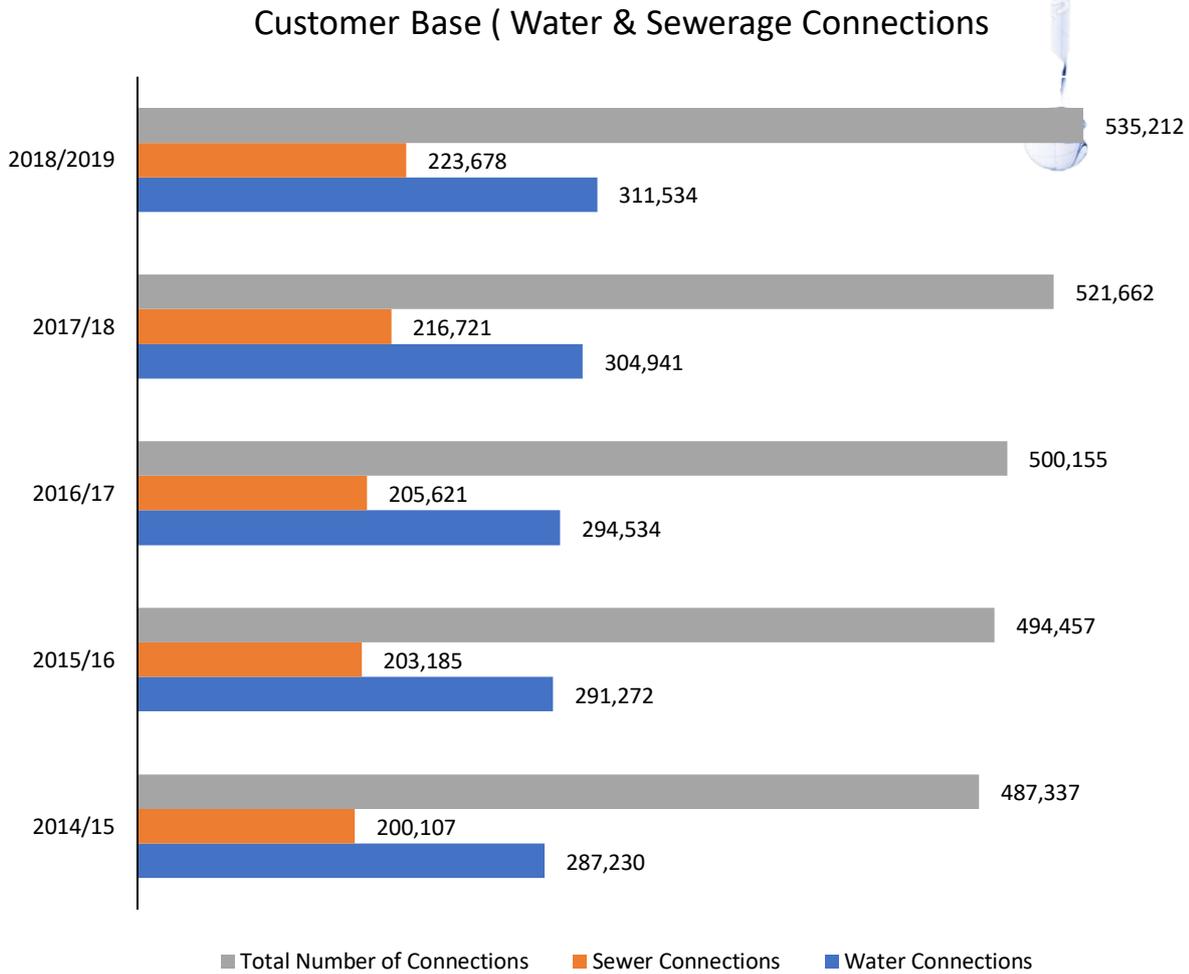
#### 2.4.5 Water and Sewerage Connections

During the implementation of the 4<sup>th</sup> strategic plan, the Company sustained positive growth in the number of customers growing by over 47,000. The number of water and sewerage connections net of de-enrolments progressively increased from 487,337 in 2014/15 to 535,212 in 2018/19 as illustrated in the chart below;





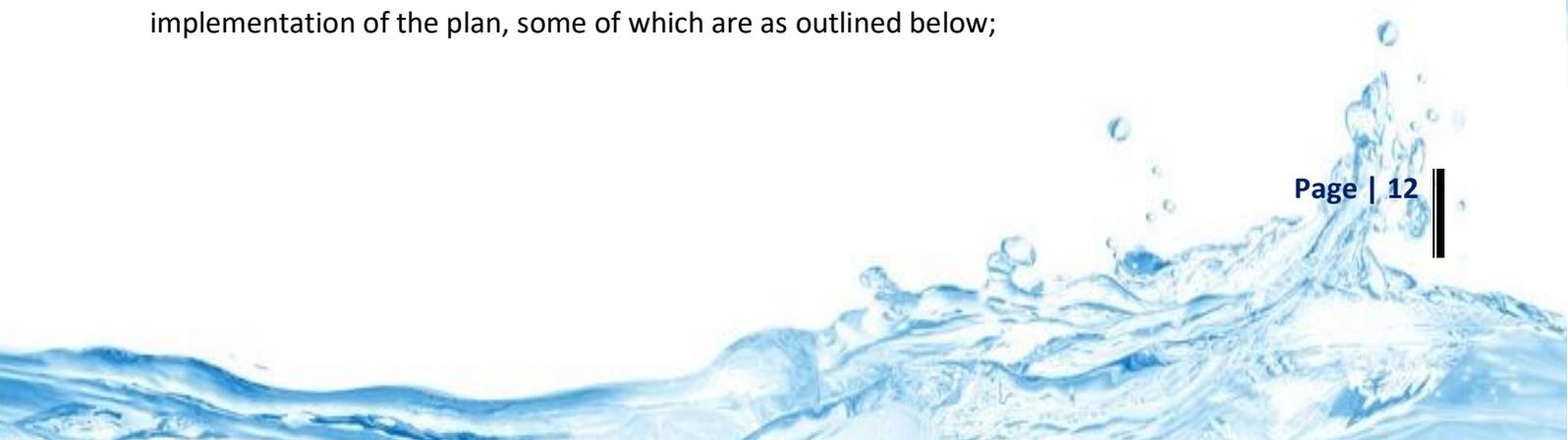
**Figure 5: Water and Sewerage Connections**



To enhance service delivery and streamline its operations, the Company identified and implemented suitable ICT driven service delivery innovations. To leverage and optimize on the emerging technologies, the Company implemented electronically enabled payment, meter reading and billing systems (MFA) and *Maji Voice* for customer feedback. This facilitated the closing of all cash offices in the regions.

### 2.5 Challenges Faced

The Company faced numerous challenges during the previous plan’s period which hampered full implementation of the plan, some of which are as outlined below;



- 
- 
- ✓ The Company during the plan period operated without a Board of Directors for a period of about two years.
  - ✓ The rapid growth of population in the County continue to pose a great challenge on the Company's infrastructure and facilities to provide clean water and sewerage services.
  - ✓ The rising costs of living and slow economic growth has resulted into low disposable income and increased social vices. Illegal water connections continue to be a challenge and have greatly contributed to the non-revenue water and high O+M costs.
  - ✓ The mushrooming of Informal Settlements continues to undermine the Company's capability to offer its services due to the encroachment and vandalization of its way leave installations and infrastructure. The Informal Settlements sewerage systems connectivity continues to be a challenge due to growing population and mushrooming of households in these Informal Settlements.
  - ✓ Collection of revenue from the Informal Sector and large debtors such as Nairobi and Kiambu Counties and other public institutions continue to be a major challenge for the Company. The Company does not have adequate capacity to enforce default measures on these institutions.
  - ✓ Inadequate enforcement of Physical Planning Act by the County Government, land grabbing and encroachment of the Company's way leave facilities and installing continue to hinder effective delivery of services by the Company.
  - ✓ Most of the main large water and sewerage infrastructure is quite old some dating back to the colonial era. The investment needed and maintenance costs for sewerage systems are much higher than for water supply systems.
  - ✓ The treatment and control of effluent by trade and industries poses a huge challenge for the Company as many discharges into the sewer system and available rivers and streams in their vicinity leading to environmental pollution.
  - ✓ The Company depends on the neighbouring counties for supply of clean water. Different priorities by various sectoral players continue to undermine the implementation of various programs and projects by the Company.

## 2.5 Mitigation of Challenges Faced

To mitigate the challenges faced during the implementation of the previous plan, the Company pursued different mitigation strategies some of which are as outlined below;

- ✓ The Company has continued to invest in new technologies to boost service delivery and revenue collection. The introduction of Customer Management System (Basis2), *Maji Voice*, Public Prepaid Dispensers (PPDs), MFA systems, Smart meters and GIS technologies are some of the notable initiatives that the Company embarked on during the plan period.
- ✓ To manage water losses more effectively, the Company embarked on DMA zoning.
- ✓ To cope with increasing pressure to delivery effectively, the Company recruited additional staff into its workforce.
- ✓ The zoning of its service delivery units has greatly helped the Company form commercially oriented regions to enjoy economies of scale and professionalize service provision.

This has significantly improved service provision, cost recovery and sustainability of the Company.

**PART III**

**3.0 SITUATION ANALYSIS**

NCWSC operates in an environment that is influenced by external and internal forces. To assess organization’s capabilities to cope with dynamic internal and external forces likely to influence its operations and strategic direction, a detailed situational analysis was undertaken through PESTLE, SWOT and stakeholders’ analysis.

**3.1 Environmental Analysis**

**3.1.1 External Environment Analysis**

The analysis of NCWSC’s Political, Economic, Social, Technological, Legal and physical Environmental (PESTLE) factors was undertaken to determine and review the major parameters that will impact on the Company’s performance and draw emergent strategies for optimizing the realization of its objectives over the envisaged plan period. Resulting from the analysis, PESTLE factors were identified as outlined below;

Factor	Issues likely to affect NCWSC	Mitigation Strategies
<b>Political</b>	<b>Governance and Politics;</b> the Company is fully owned by the Nairobi County Government. The Company relies on leadership and guidance from the County Government.	Foster good working relations and adherence to laid out governance and internal control policies and guidelines.
	<b>Inter-county water disputes;</b> Nairobi County depends heavily on the neighbouring counties for water sources. Mismatched priorities and diverse interests continue to dominate the debate on how water will be shared as a national resource. Vested diverse interests undermine efforts focused on the protection of water catchment areas.	Engage the Regulator, National Government, Ministry responsible for water and other water and sanitation sector players.
	<b>Encroachment and grabbing of Company property;</b> historical political patronage at the	Lobby with County, AWWDA and National government for



Factor	Issues likely to affect NCWSC	Mitigation Strategies
	national and county level resulting to massive encroachment and grabbing of Company’s land and other key facilities and Installations.	demarcation, securing and protection of its property as well as registration with Ministry of Land (Survey of Kenya).
<b>Economic</b>	<p><b>Taxation;</b> water is an essential commodity and NCWSC only provides it as a service and not a tool of trade. However, key inputs used in the production of quality drinking water continue to attract taxation from the national government through treasury hence adversely affecting the operations and maintenance costs of the Company.</p>	Lobbying for Zero Rating of water and exemption for Corporation tax by KRA.
	<p><b>Inflation;</b> the Cost of living in Kenya has been rising despite projected economic growth of between 5%-7% over the plan period. This continues to put pressure on the Company’s operation costs.</p>	Through deliberate strategies aimed at cost containment and avoidance by the adoption of modern technologies and other innovations to drive the business.
	<p><b>Infrastructure;</b> Nairobi County contributes a significant portion of the National GDP (21.7%, KNBS Gross County Product 2019 Report) and features monumental and key national infrastructure development projects. The County has witnessed a surge development of domestic and commercial properties in all its wards, putting a strain on the existing water and sanitation infrastructure. There is dire need to upgrade, expand and construct new water and sanitation infrastructure which require huge capital investment.</p>	Lobby for more funding to match growing demand and proper integration of Nairobi County Planning design with water and sanitation infrastructure networks.
	<p><b>Unemployment;</b> Nairobi City County population has been rising over the years and the levels of unemployment has also been rising attributed partly to rising rural-urban migration as people come into the capital to look for greener pastures and</p>	Continuous stakeholders’ engagement and public awareness campaigns.





Factor	Issues likely to affect NCWSC	Mitigation Strategies
	<p>employment. The county hosts numerous institutions of higher learning which churn out thousands of job seekers most of whom look for employment opportunities within the County.</p> <p>The rising levels of unemployment continue to create mushrooming of Informal Settlements which put a lot of pressure on the delivery of services by the Company. The levels of vandalism, illegal connections and destruction of key installations in the Informal Settlement is a major concern.</p>	
<p><b>Socio-Cultural Issues</b></p>	<p><b>High Population growth;</b> Nairobi City County is the Capital of Kenya and will continue to attract high rural-urban migration by the virtue of its GDP status. The population transiting through the County together with those residing within the county require adequate quality drinking water and sanitation services at all times.</p> <p><b>Mushrooming of Informal Settlements;</b> high levels of unemployment and rural-urban migration has resulted in mushrooming of Informal Settlements which contribute significantly to non-revenue water, vandalism and destruction of Company’s key infrastructure.</p>	<p>Lobby for more funding to expand service provision to cover 100% sewer and water coverage.</p> <p>Lobby for the County and National Government to provide affordable housing and pro-poor policies to facilitate service delivery by the Company.</p>
<p><b>Technological Issues</b></p>	<p><b>Automation in water and waste water management systems;</b> the Company has partially automated its key processes and systems. The cost involved in automating the facilities and service delivery attributes and systems of the Company is extremely high requiring heavy capital investment. This is further complicated by the dynamic nature of technology in the water and sanitation sector.</p>	<p>Lobby for more funding for automation and modernization of key processes and systems within the Company.</p>





Factor	Issues likely to affect NCWSC	Mitigation Strategies
<b>Legal Issues</b>	<b>Legislation of key policies;</b> the Company requires passing of key legislation at the County and National Assemblies to make changes such as review of levies and tariffs, introduction of penalties and sanctions for violations e.g. County Water Bill and Water Act 2016. The process and political interests undermine effective and timely formulation and implementation of key policies requiring legislation to enhance service delivery.	Lobbying with policymakers and legislatures at County and National levels.
<b>Environmental Issues</b>	<b>Climate Change and Global Warming;</b> the country continues to experience erratic weather patterns and reduced amount of rainfall, hence intermittent and inconsistent supply of adequate drinking water.	Lobby for more funding to conserve existing water catchment areas and construct new dams.
	<b>Change in Land Use;</b> increased human activities near the water catchment areas have also resulted in soil erosion resulting in increased siltation of water reservoirs and dams. Desilting of dams and raw water intakes require a lot of resources from the Company.	Lobby for more funding to conserve existing water catchment areas through tree farming.
	<b>Trade &amp; Industrial effluent;</b> the county hosts a high number of businesses and industries some of which do not comply with guidelines and standards for discharging effluent into the sewer system, resulting in increased pollution. Some of the trades and industries discharge their effluent into the rivers near their areas of operation.	Lobbying and enforcement for industries to construct their own pre-treatment plants and the implementation of the Polluter Pay Principle.
	<b>Solid Waste;</b> some of the County residents clog the sewer systems with solid waste which causes sewer blockage and eventual overflow of sewage into the open causing health risks and pollution.	Lobby the County Government for better solid waste management and public awareness and sensitization on how to handle solid waste.

Table 3: PESTLE Analysis





### 3.1.2 Internal Environment Analysis

The analysis of NCWSC’s internal environment was undertaken to determine and review the major parameters that impact on its performance and draw emergent strategies for optimizing the realization of the Company’s objectives over the envisaged plan period. Resulting from the analysis Strengths, Weaknesses, Opportunities and Threats were identified as follows;

INTERNAL FACTORS	Strengths	Weaknesses
	<ul style="list-style-type: none"> <li>– A well-educated and skilled workforce</li> <li>– Favourable legal framework</li> <li>– Strong customer base by virtue of its area of jurisdiction characterized with the highest GDP compared with other counties</li> <li>– Good raw water quality from sources within the County and other neighboring counties</li> <li>– High uptake of technology in its operations and key services</li> <li>– The Company is strategically placed in the capital city</li> <li>– Low production, transmission and distribution cost due to gravitated system</li> <li>– Strong asset base secured by the NCCG</li> <li>– Continued Support from Development Partners</li> <li>– Strong corporate brand name</li> </ul>	<ul style="list-style-type: none"> <li>– Inadequate raw water supply due to ever increasing demand due to high population growth</li> <li>– High NRW attributed to commercial and technical losses</li> <li>– Weak organizational culture resulting to unoptimized staff productivity</li> <li>– Non-compliance to waste water regulation 2006 and some set policies and procedures</li> <li>– Inadequate organizational structure resulting to poor staff optimization</li> <li>– High debtors and creditors affecting the liquidity of the Company</li> <li>– Some of the infrastructures are dilapidated</li> <li>– Inadequate finances to fund its operations</li> <li>– Non-adherence to staff productivity ratio</li> <li>– Inadequate information management</li> </ul>





EXTERNAL FACTORS	Opportunities	Threats
	<ul style="list-style-type: none"> <li>– High water Demand due to high population growth</li> <li>– Good Support from National/County government</li> <li>– Liberalized media space with a vibrant social media</li> <li>– Goodwill from stakeholders for consultative water tariff review</li> <li>– Emerging global clamour on environmental conservation due to concerns on climate change</li> <li>– Water is a key enabler for the big four agenda and SDGs</li> <li>– Willing and wide base of Development Partners</li> </ul>	<ul style="list-style-type: none"> <li>– Conflict with other counties for trans-boundary water sources and competition for water resources.</li> <li>– Political interference</li> <li>– Infrastructure vandalism and destruction attributed partly to mushrooming of Informal Settlements and rapid population growth within the city.</li> <li>– Inadequate funding</li> <li>– Mushrooming of Informal Settlements</li> <li>– Global warming and climatic changes</li> <li>– Rapid ICT technological changes leading to high risk of obsolescence and replacement costs</li> <li>– The high appreciation of the cost of land resulting to high cost of acquisition of the same for expansion of key facilities</li> <li>– Increased unemployment resulting into increased vices attributed to unemployment</li> <li>– Increasing rural-urban migration</li> <li>– Rising Global cost of inputs</li> <li>– Depletion of groundwater</li> <li>– Growing threat of terrorism</li> </ul>

Table 4: SWOT Analysis

### 3.2 Stakeholder Analysis

Being conscious of the concerns and interests of internal and external stakeholders, NCWSC will facilitate the development of harmonious relations with them and thus provide a favourable environment for optimal operations. To the extent possible, NCWSC will take these concerns and interests in its decision-making processes. The BoD, BoM, Company management and other staff are its internal stakeholders, whereas the external stakeholders include those elements or groups that directly affect NCWSC’s operations or are affected by it, namely; Development Partners, Government Ministries; State Departments and Agencies; NCWSC Customer’s; local communities; Company suppliers; competitors; creditors; special interest groups and trade associations.

Stakeholder	Stakeholder expectations	NCWSC Expectations
Customers	– Guaranteed water quality as per the KEBS	– Pay the bills timely – Accessibility





Stakeholder	Stakeholder expectations	NCWSC Expectations
	<ul style="list-style-type: none"> <li>– Adequate quantity and scheduled water</li> <li>– Adherence to the rationing program</li> <li>– Timely and correct bills</li> <li>– Convenience i.e. payment options, prompt services</li> <li>– Transparency and Accountability</li> <li>– Effective communication</li> <li>– Customer engagement forums, personalized engagements</li> <li>– Excellent and standardized customer service (same service across regions)</li> <li>– Timely response to customer complaints</li> </ul>	<ul style="list-style-type: none"> <li>– Prudent use of our services i.e. proper use of water as well as sewer disposal</li> <li>– Report illegal connections, leaks, bursts</li> <li>– Good ambassadors’</li> <li>– Respect for our staff</li> </ul>
Employees	<ul style="list-style-type: none"> <li>– Job security</li> <li>– Competitive and timely remunerations</li> <li>– Conducive working environment and staff welfare</li> <li>– Staff recognition and appreciation</li> <li>– Engagement and inclusion</li> <li>– Prudent management and use of resources</li> <li>– Compliance with set laws, regulations and policies</li> <li>– Proper placement</li> <li>– Transparency and Accountability</li> </ul>	<ul style="list-style-type: none"> <li>– High productivity</li> <li>– Loyalty and commitment</li> <li>– Adherence to NCWSC policies, procedures and guidelines</li> <li>– Cooperation and teamwork</li> <li>– Availability and reliability</li> <li>– Good brand ambassadors</li> <li>– Prudent management and use of resources</li> </ul>
Staff Union	<ul style="list-style-type: none"> <li>– Recognition</li> <li>– Better terms</li> <li>– Deduction and timely remittance of their members’ dues</li> <li>– Involvement</li> <li>– Facilitation to attend to union matter</li> </ul>	<ul style="list-style-type: none"> <li>– Support and staff engagement</li> <li>– Staff mobilization to perform and improved productivity</li> <li>– Amicable and speedy resolution of staff grievances</li> <li>– Prudent management and use of resources</li> </ul>





Stakeholder	Stakeholder expectations	NCWSC Expectations
BoD	<ul style="list-style-type: none"> <li>– Transparency and Accountability</li> <li>– Good leadership and governance by management and staff</li> <li>– Transparency and Accountability</li> <li>– Adequate, timely and accurate information for decision making</li> <li>– Prudent stewardship and use of resources by all</li> <li>– Protection of Company brand and positive projection of the Company image</li> <li>– Support and commitment by staff in the execution of Company’s mandate</li> <li>– Good performance and improved productivity</li> <li>– Adherence to policies, statutory regulations, procedures and guidelines</li> </ul>	<ul style="list-style-type: none"> <li>– Good leadership and governance</li> <li>– Lobby for Company’s interests with other key stakeholders</li> <li>– Effective oversight of the Company,</li> <li>– Participation in key activities of the Company</li> <li>– Champion the interests/brand of the Company</li> <li>– Timely decision making</li> <li>– Prudent management and use of resources</li> <li>– Speedy approval of Company policies,</li> <li>– Ensure adherence to statutory regulations</li> <li>– Good understanding of the operations of the Company and proper guidance,</li> <li>– Speedy and transparent appointment of top management</li> </ul>
BoM	<ul style="list-style-type: none"> <li>– Good leadership and governance by management and staff</li> <li>– Adequate, timely and accurate information for decision making</li> <li>– Prudent stewardship and use of resources by all</li> <li>– Transparency and Accountability</li> <li>– Protection of Company brand and positive projection of the Company image</li> <li>– Support and commitment by staff in the execution of Company’s mandate</li> <li>– Good performance and improved productivity</li> </ul>	<ul style="list-style-type: none"> <li>– Provide strategic direction of the Company</li> <li>– Good leadership and governance</li> <li>– Prudent management and use of resources</li> <li>– Effective management of the Company,</li> <li>– Lobby and champion for Company’s interests with other key stakeholders</li> <li>– Timely decision making</li> <li>– Speedy approval of Company policies,</li> <li>– Adherence to policies, statutory regulations, procedures and guidelines</li> <li>– Effective mobilization of resources both financial and human capital to adequately execute the Company’s mandate</li> <li>– Conducive work environment for improved productivity and performance</li> </ul>





Stakeholder	Stakeholder expectations	NCWSC Expectations
	<ul style="list-style-type: none"> <li>– Adherence to policies, statutory regulations, procedures and guidelines</li> </ul>	
NCCG	<ul style="list-style-type: none"> <li>– Efficient and effective service delivery</li> <li>– Prudent management and use of resources</li> <li>– Transparency and Accountability</li> <li>– Compliance with statutory regulations, government policies and guidelines</li> </ul>	<ul style="list-style-type: none"> <li>– Funding</li> <li>– Support through laws, regulations and policies enforcement and lobbying</li> <li>– Operational independence/autonomy</li> <li>– Conducive laws to support business (legislation)</li> <li>– Proper County/city planning</li> <li>– Appointment of a competent and professional BoD</li> <li>– Advocacy</li> </ul>
Neighboring Counties (Kiambu, Machakos, Muranga, Nyandarua, Kajiado)	<ul style="list-style-type: none"> <li>– Share of the water resource</li> <li>– Contribution to protection of the catchment</li> <li>– Incentives (Employment opportunities, CSR activities etc.)</li> <li>– Transparency and Accountability</li> </ul>	<ul style="list-style-type: none"> <li>– Good neighbourliness</li> <li>– Protection of water mains</li> <li>– Protection of water catchment areas</li> </ul>
Government Agencies (Auditor General, KRA, WaSREB, WRA, NEMA, KeNHA, Kenya Power, NCA, PPRA, etc.)	<ul style="list-style-type: none"> <li>– Maintain proper books of accounts</li> <li>– Provide required information</li> <li>– Cooperation during audits</li> <li>– Timely and accurate remittance of statutory deductions, levies, taxes and payment debts and other obligations</li> <li>– Efficient and effective service delivery</li> <li>– Prompt payment of abstraction fees</li> <li>– Transparency and Accountability</li> <li>– Compliance to laws, regulations and guidelines</li> <li>– Compliance and collaboration</li> </ul>	<ul style="list-style-type: none"> <li>– Fair and objective audits and reports</li> <li>– Tax exemption especially Corporate tax and VAT (zero-rate)</li> <li>– Timely tariff reviews</li> <li>– Fair regulatory regime/framework</li> <li>– Reasonable levies</li> <li>– Catchment conservation</li> <li>– Sharing of information and cooperation</li> <li>– Sensitization of staff on changes I regulations, legislations and sector guidelines</li> </ul>
Media	<ul style="list-style-type: none"> <li>– Accurate information</li> <li>– Prompt payment</li> </ul>	<ul style="list-style-type: none"> <li>– Report responsibly-verify information</li> <li>– Create awareness</li> </ul>





Stakeholder	Stakeholder expectations	NCWSC Expectations
	<ul style="list-style-type: none"> <li>– Transparency and Accountability</li> </ul>	<ul style="list-style-type: none"> <li>– Promote corporate image</li> <li>– Highlight challenges in the water and sanitation sector</li> <li>– Factual and fair coverage</li> </ul>
<b>Community (WRUA, CBOs/ Neighborhood associations, WAGS and NGOs)</b>	<ul style="list-style-type: none"> <li>– Annual timely subscription</li> <li>– Transparency and Accountability</li> <li>– Participate in their activities i.e. catchment conservation</li> <li>– Reporting illegalities i.e. tree felling, illegal fishing</li> <li>– Compensation</li> <li>– Engagements and public participation</li> <li>– Effective service provision</li> <li>– Sensitization and public awareness</li> <li>– Empowerment – i.e. training and awareness, economic empowerment i.e. tank donations</li> <li>– Collaboration and support</li> </ul>	<ul style="list-style-type: none"> <li>– Participate in their activities i.e. catchment conservation</li> <li>– Compensation</li> <li>– Community policing</li> <li>– Report illegal activities</li> <li>– Cordial relationship</li> <li>– Collaboration</li> <li>– Adherence to laws and regulations</li> </ul>
<b>Sector Associations Local – WASPA International - AfWA, IWA, GIWEH, IWRA, World Water Council,</b>	<ul style="list-style-type: none"> <li>– Prompt payment of subscription fees</li> <li>– Active participation</li> <li>– Partnership and collaboration</li> <li>– Regional representation</li> <li>– Transparency and Accountability</li> </ul>	<ul style="list-style-type: none"> <li>– Advocacy</li> <li>– Peer to peer learning</li> <li>– Benchmarking opportunities</li> <li>– Lobbying for favourable policies</li> <li>– Local water sector cohesion</li> <li>– Participate in development and monitoring water sector goals</li> </ul>
<b>Development Partners (i.e. USAID (KIWASH), World Bank, AFD, AFDB, KFW, World Waternet, Umande Trust, Maji na Ufanisi)</b>	<ul style="list-style-type: none"> <li>– Good governance</li> <li>– Prudent and effective utilization of resources</li> <li>– Transparency and Accountability</li> <li>– Partnership and collaboration</li> </ul>	<ul style="list-style-type: none"> <li>– Favourable terms and conditions</li> <li>– Timely disbursement of funds</li> <li>– Adherence to sector laws and regulations</li> <li>– Partnership and collaboration</li> </ul>
<b>Water and Sewerage</b>	<ul style="list-style-type: none"> <li>– Appropriate framework to support their business</li> </ul>	<ul style="list-style-type: none"> <li>– Supply of portable water</li> <li>– Practice Ethical practices</li> </ul>



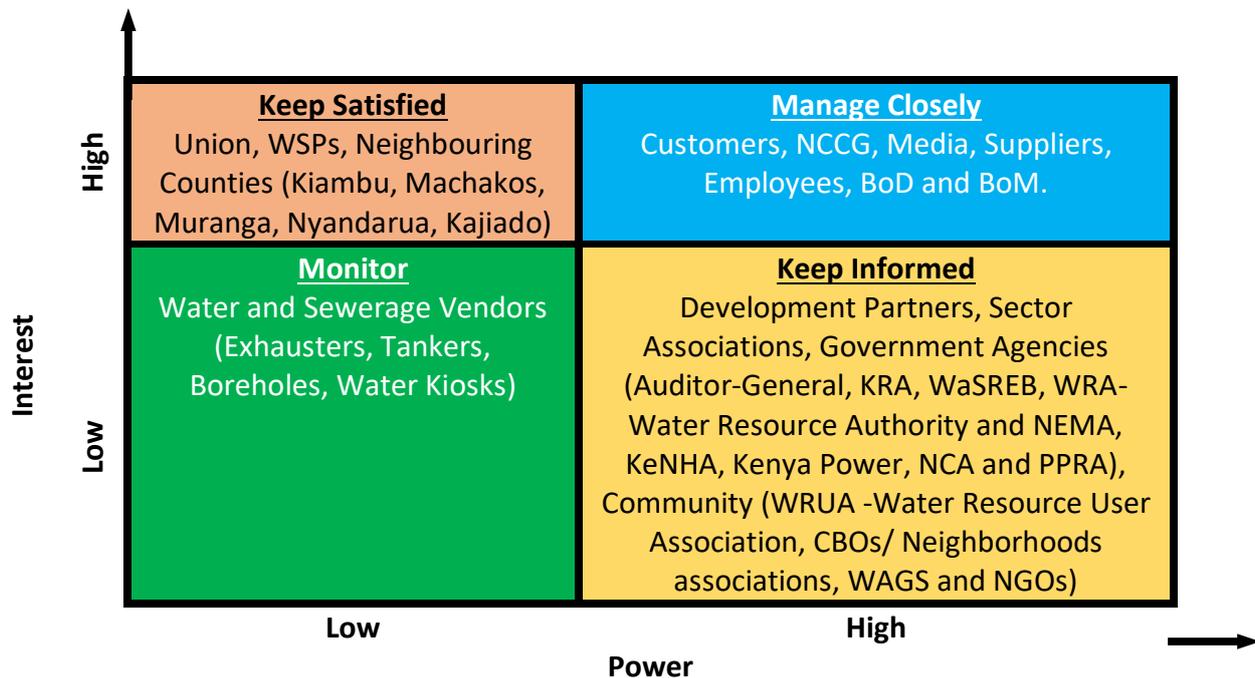


Stakeholder	Stakeholder expectations	NCWSC Expectations
Vendors <b>(Exhausters, Boreholes, Water Kiosks)</b>	<ul style="list-style-type: none"> <li>– Guarantee of water quality</li> <li>– Accurate metering</li> <li>– Permits issuance</li> <li>– Transparency and Accountability</li> </ul>	<ul style="list-style-type: none"> <li>– Adherence to water quality standards</li> <li>– Payment and compliance with licensing fee</li> <li>– Compliance with NEMA regulations, Company policies and regulations</li> <li>– Safe waste disposal</li> </ul>
WSPs	<ul style="list-style-type: none"> <li>– Supply of adequate/reliable bulk water</li> <li>– Transparency and Accountability</li> <li>– Partnership and collaboration e.g. through benchmarking</li> </ul>	<ul style="list-style-type: none"> <li>– Timely/Prompt payment for bulk water supply</li> <li>– Partnership and collaboration e.g. through benchmarking, water sector lobbying</li> <li>– Good relations/ cooperation</li> <li>– Prudent use of the supplied resource</li> </ul>

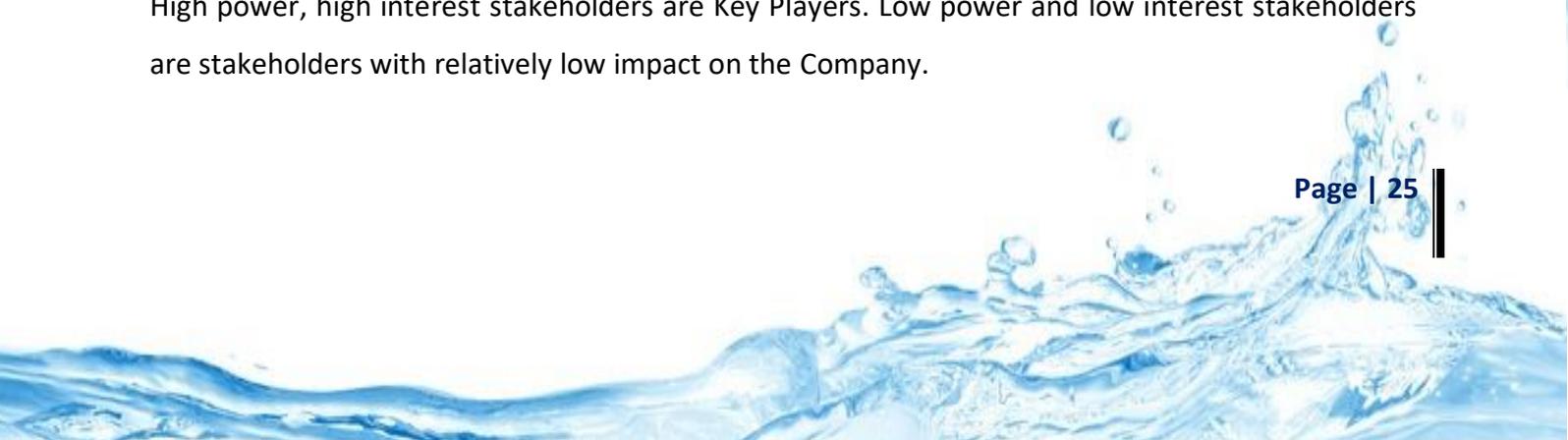
**Table 5: Stakeholders Analysis**

The stakeholders identified were analyzed and mapped into their respective power and interest quadrant as shown in the chart below;

**Figure 6: Stakeholders Map**



High power, high interest stakeholders are Key Players. Low power and low interest stakeholders are stakeholders with relatively low impact on the Company.



### 3.3 Key Success Factors

NCWSC's ability to achieving its Plan objectives and realize its vision will depend on the following key areas:

- **Infrastructure development;** to increase water coverage and access to the sewer system for the Company, key infrastructure must be continuously developed and rehabilitated to meet the growing demand for better quality and readily available and accessible water and sanitation services both in the formal and informal settings.
- **O+M Cost Recovery;** ability for the Company to operate sustainably and be able to recover fully its O+M costs without compromising on the quality of service delivery and access to all Nairobi residents to clean water and sanitation services that meet their expectations.
- **Resource Mobilization, Management and Networking;** NCWSC's ability to create and maintain strong networks that will enable it to mobilize adequate resources to fund its operations adequately.
- **Innovation and Creativity;** ability of the Company to embrace new technologies and innovations in service delivery for water and sewer standards as guided by the regulator
- **Institutional capability;** developing internal capacity within the Company to be more responsive to dynamic and diverse stakeholders' expectations through creating a critical mass of staff equipped with tools and equipment as well as the required skills and competencies to deliver effectively.
- **Stakeholder Engagement;** to manage stakeholders better, the Company will continue to invest in key strategies and interventions that will facilitate proactive stakeholder's relationship management at the sectoral level to ensure effective management of its resources and delivery of its mandate in the provision of sustainable clean water and sanitation services.
- **Reduction of Water Losses;** to effectively reduce non-revenue water through expansion of well-supported and adequately finance operational units.

## PART IV

### 4.0 STRATEGIC FOCUS

#### 4.1 Strategic Focus

The focus of NCWSC is inspired by its vision and mission, driven by prioritization and the necessity to balance strategic and practical needs of its stakeholders, informed by the situational analysis undertaken through a SWOT and PESTLE analysis and basing the outcome on the existing resources and emerging opportunities.

To effectively realize its mandate, the Company will focus on the following thematic areas;

- i. Water Sources, Treatment, Transmission and Distribution
- ii. Waste Water Networks, Conveyance and Treatment
- iii. Non-Revenue Water Management
- iv. Customer Focus and Stakeholders Engagement
- v. Governance and Institutional Capacity Development
- vi. ICT & Other Support Infrastructure
- vii. Financial Stewardship

#### 4.2 Goals, Objectives, Strategies, and Activities

The summarized Themes, Goals and Objectives with respective support activities are as outlined below;

##### THEME 1: WATER SOURCES, TREATMENT, TRANSMISSION AND DISTRIBUTION

Goal	Objectives	Strategies	Activities
Raw water inlets-to meet the demand for water within service jurisdiction	Ensure efficient functionality of inlet works by rehabilitation, upgrading and continuously maintaining	Have a well-maintained intake for efficiency	Desilting Mwagu, Sasumua and Kikuyu Springs intakes
			Bush clearing for Kiama, Mwagu and Sasumua intake works
			Fencing of Mwagu and Sasumua in-let works
			Construction of coffer dam upstream of Mwagu intake
			Annual maintenance of Mwagu, Kimakia, Sasumua and Kikuyu Springs intakes



Goal	Objectives	Strategies	Activities
			Enhanced surveillance of the Mwagu, Sasumua, Kimakia and Kikuyu Springs intakes
Raw and treated water transmission and distribution mains to meet 950,000 M <sup>3</sup> per day production capacity	Ensure transmission and distribution of 100% of water	Have a well-maintained transmission and distribution mains	Lay 10Km of DN 1000 raw water pipeline from Maragwa 4 dam & Thika dam to Ndunyu Chege
			Lay 50Km of DN 1000 treated water pipeline between Ndunyu Chege Water Treatment Plant and Gigiri
			Lay 17 Kms of DN 800 treated water line from Kwamaiko to Ngethu
			Lay 1 Km of DN 800 raw water line at Sasumua
			Upgrading and extension of various size pipelines; northern, central and southern regions-25 km and N. Eastern, eastern, and western regions 45.7 km
			Installation of isolation valve to the pump house at Kabete
		Construct 294.42 Kms of new transmission and distribution mains, rehabilitate/renew the existing dilapidated raw, treated and distribution water transmission lines, investments to 2021 demand horizon and maintenance of existing raw water transmission, treated water transmission and distribution mains	Lay 4Km of DN 800
			Lay 9.21Km of DN 600
			Lay 13.1Km of DN 500
			Lay 25.84Km of DN 300
			Lay 7.66Km of DN 250
			Lay 25.34Km of DN 200
			Lay 14.42Km of DN 150
			Lay 5.32Km of DN 1400
Lay 7.25Km of DN 1200			
Lay 1.85Km of DN 1000			
Land acquisition for wayleaves	Lay 0.95Km of DN 700		
	Lay 1.54Km of DN 400		
Maintenance of service reservoirs	Zone 3n increase Uthiru reservoir capacity by 16,000 m <sup>3</sup> and Kyuna by 1000 m <sup>3</sup>		
	Regular maintenance of raw, treated and distribution mains, chambers, marker posts and appurtenances		
Water treatment plants to meet the 2024 1 million M <sup>3</sup> demand for water within service jurisdiction	Ensure 97% raw water received at the plants is treated to the acceptable standard	Optimization of water treatment plants	Clearing 100kms wayleaves
			Demarcate & register 100kms of way-leaves at the survey of Kenya
			Cleaning of service reservoirs
			Additional pumping stations at Kyuna, Gigiri, Kabete and Serena
			Construction of 1 No clarifiers and 6 No filtration units for phase 2 at Ngethu treatment works
			Recycling of filter back wash water
			Upgrade the treatment plants to increase water quantity
			Construct of a modern water laboratory





Goal	Objectives	Strategies	Activities	
Develop new water sources	Increase water production from the current 525,000 m <sup>3</sup> per day to 950,000 m <sup>3</sup> per day by June 2024	Engage the National Government for fast racking of project initiation, and or completion	Completion of Northern collector 1 which will contribute 140,000 m <sup>3</sup> /day by Dec 2020	
			Construction of Maragua 4 dam and South Mathioya water transfer tunnel, treatment plant(s)	
			Develop Northern Collector 2 to sustain the 2 dams (Maragua Dams) - 120,096 m <sup>3</sup> /day	
			Additional new DN 800 water pipeline from Matara to Ngethu by constructing a 6.5 km pipeline.	
			Increase treatment units (Clarifiers & filters) at Ngethu.	
			Construct 20 km DN 800 pipeline for treated water from Ngethu to Kwa Maiko and connect it to the existing DN 900 line to Gigiri, which will increase flow by 50,000 m <sup>3</sup> /day	
		Construction of 300 million m <sup>3</sup> Ndarugu dam and a treatment plant with a yield of 216,000 m <sup>3</sup> / day		
		Drilling of boreholes	Drilling boreholes	
Ensure effective and sustainable management of water sources	Monitor water quality within the catchment areas	Compliance to Water Quality Regulations 2006	Quarterly Sampling and testing for all sources Acquire equipment for monitoring of silt levels at the intakes and water sources	
	To sustain catchment areas	Environmental conservation through stakeholder engagement (e.g. Upper Tana Nairobi Water Fund (UTNWF))	Establish nurseries in all the water sources Tree planting and other conservation activities Hold stakeholder’s engagement forums Engage relevant stakeholders for enforcement of key environmental laws	
	Development and maintenance of minor water infrastructure	Enhance minor water infrastructure	Development and maintenance of minor water infrastructure	
	Ensure effective and sustainable water treatment	Enhance process and quality control systems	Compliance to Drinking Water Quality Standards (KEBS 2018)	Equip and resource the laboratory with appropriate tools, equipment and lab chemicals
				On-site chlorine production
				Implementation of water safety plan
Research & implement new water treatment chemicals and technologies				
Accreditation of Blue water laboratories to ISO17025:2018				
Establish Chlorine Boosting stations				
Liquid chlorine dosing system installation				
Installation of online Blue water monitoring devices				
Comply with Sampling and testing guidelines for Blue Water				
Carry out annual internal and external proficiency testing				
Acquisition of standardization mark of Quality and annual renewal				

Table 6: Water Sources, Treatment, Transmission & Distribution





**THEME 2: WASTE WATER NETWORKS, CONVEYANCE AND TREATMENT**

Goal	Objectives	Strategies	Activities
<b>To collect and convey 100% of waste water generated in Nairobi City to WWTPs</b>	Increase sewerage networks coverage from 50% to 80%	Enhance waste water treatment plants and facilities	Land acquisition for wayleaves
			Construct new sewer lines of various sizes
			Demarcate & register the way-leaves at the survey of Kenya
			Acquire land and construct new waste water treatment plants to meet the demand
			Reconstruction of Kiu river trunk sewers to correct invert levels
			Acquire a new incinerator for Ruai treatment works
			Construction of perimeter fences/walls
			Acquire land and develop 3 no. Waste water discharge points for exhausters
		Upgrading and Rehabilitation of existing WWTPs and Facilities (O+M)	Maintenance of treatment plants, existing trunks and lateral sewers & man holes
			Annual desilting of trunk and lateral sewers
			Clearing encroached wayleaves
			Desludging of waste water treatment plants ponds
			Rehabilitation and fencing of Karen and Kahawa west waste water stabilization ponds
Measurement of inlet and outlet flows at Ruai and Kariobangi waste water treatment plants			
Expansion of sewer network by 30% by June 2024	Rehabilitate and upgrade the existing waste water laboratories in Kariobangi and Ruai.		
	Plan/re-align sewer infrastructure to be consistent with re-zoning of land use/CIDP		
	Update the attributes of sewer infrastructure on GIS		
Decentralize some sewer treatment areas by June 2024	Lobby for funding from partners, government and adoption of Private-public-Partnership for sanitation.		
	Initiate a sanitation revolving fund		
To improve/ Enhance the hydraulic efficiency of the sewer network	Improve water and sanitation services in the Informal Settlements	Increase access of water and sanitation	Improve community participation/partnership in secondary sewer constructions.
			Land acquisition
<b>Minimize disruption of</b>	To ensure 100% compliance to	Trade Effluent Management &	Re-designing & rehabilitation of existing sewer and implementation of simplified sewer system in Informal Settlements to match demand as per new developments
			Develop and implement of trade effluent Management system (TEMS)





Goal	Objectives	Strategies	Activities	
<b>waste water conveyance, sewer degradation and WWT processes</b>	discharge standard into public sewers by 2023 and to enable reuse of faecal sludge	Decentralize Sewer treatment	Mapping of industries attributes and location on GIS platform	
			Quarterly Stakeholder engagement	
			Monitoring of industries: Monitoring the quality of effluent discharge from industries	
			Acquire mobile laboratory unit	
	To protect Public Health	Faecal sludge management.	Improve On-site sanitation for non-sewered areas	Promote wastewater recycling by industries.
				Re-use of Faecal sludge to produce biogas, manure, briquettes
				Develop policy for decentralised/off grid treatment facilities sewer system to aid recycling of green water
				Development of sanitation policy
				Develop a policy paper for tracking exhausters
				Technology for monitoring waste sources and disposal (Tracking exhauster)
				Quantitative and qualitative Monitoring of effluent /faecal sludge at the discharge point (Exhausters)
				Use of appropriate technology to monitor faecal sludge
				Research/ Technology on decentralised sanitation management
				To ensure compliance to discharge standard into environment
	Engage for policy/ governance for onsite sewer management			
	Lobby for Partnership especially for densely populated areas with land tenure challenges			
	Environmental Management System Certification			
	Engage the County Government to reclaim illegally acquired land e.g. Ruai, Kariobangi Kahawa and Karen.			
	Pilot the use of wetlands			
	Construct wetlands			
	Rehabilitation and automation of the inlet works.			
De-sludging ponds				
Seek accreditation of the water and wastewater laboratory				
Rehabilitate/equip the wastewater laboratory				
Procure laboratory information management system				
Procure mobile laboratory				

Table 7: Waste Water Networks, Conveyance & Treatment





**THEME 3: NON-REVENUE WATER MANAGEMENT**

Goal	Objectives	Strategies	Activities
<b>Reduce NRW</b>	Reduction of combined NRW from 36% to 25%	Reduction of Commercial losses	Replace stopped meters, faulty, damaged, aged, stolen meters
			Install Meter Installation seals
			Measure system input (i.e. Raw Water, Transmission & Distribution Network)
			Measure the flows into the DMAs
			Construction of Chambers for ALL bulk meters
			Carryout a Customer Identification Survey (CIS), mapping meter points and Data Clean up
			Identify and meter all fire hydrants in the distribution systems
			Regularization of illegal water & sewer connections
			Procure Automated Digital Meter Testing Bench
			Expansion of Meter Testing Sheds for the Test Bench
			Procure Portable Testing Kits
			Install AMR ultrasonic meters on HC's (Customers consuming 200units and above)
			Install Automated Meters with Narrow Band (NB) Internet of Things (IoT) and like technology
			Construction and rehabilitation of meter Chambers in Informal Settlements
		Installation of PPDs in informal areas	
		Implementation of modern and more responsive billing system	
		Reduction of technical losses	Timely resolution and repair of leaks and bursts within the transmission and distribution lines
			Procurement of leak detection Van
			Relocation of main distribution lines from underground to above surface in identified areas like Informal Settlements
			Installation of small aperture air valves at customer meter points
			Installation of isolation valve to the pump house at Kabete
Install bulk flow meters			
Procure NRW Management System	Procurement and installation of 250 pressure loggers		
	Replacement of old pipes in zone 8; CBD/ Industrial Area-34.3km, Pumwani/starehe-54.5km, south zone 8 (Jogoo, Embakasi and Viwandani)-46.7km, totaling to 135.5 Km		
	Procure assortment of leak detection Equipment		
	Acquire NRW Management System		

**Table 8: Non-Revenue Water**





**THEME 4: CUSTOMER FOCUS & STAKEHOLDER ENGAGEMENT**

Goal	Objectives	Strategies	Activities
<b>Enhance Stakeholder Engagement</b>	To guarantee efficient service delivery	Hold Public participation forums	Hold workshops with CBOs, WRA, WASREB Hold ASF (Annual Stakeholders Forum)
		Develop a communication strategy	Conduct Media campaigns, engagement and publications & social platforms
	Enhance stakeholders' relations and engagements	Compliance to set regulatory standards	Prompt payment of levies and fees
		Partnership with County Government and other government agencies on disconnection of illegal connections	Conduct regular mass disconnection & arrests
		Identification and Engagement with Research Institutions	Publication of research papers
		Engage with county and national governments	Collaboration and holding meetings
	To strengthen the corporate brand	Engage in Corporate Social Responsibility	Adopt & Implement CSR Policy
		Brand development	Brand Manual Branding exercise
	To strengthen the corporate brand	Engage in Corporate Social Responsibility	Corporate support to the underprivileged
		Brand development	Develop a brand manual Branding activities
	Improve working relations with NCCG	Having a performance contract in place with NCCG	Signing the performance Contract
	<b>Enhancing Service Delivery</b>	To increase customer satisfaction by 5% annually from the current 73%	To resolve customer complaints
Upgrading of the customer complaints handling system			
Carry out an external customer satisfaction survey			
Equitable water distribution		Adherence to water distribution schedule	
	Continuous review of the water distribution schedule		
Customer outreach	Communication of the distribution schedule to the customers		
	Carry out customer care workshops, clinics and road shows		

**Table 9: Customer Focus & Stakeholder Engagement**





## THEME 5: GOVERNANCE & INSTITUTIONAL CAPACITY DEVELOPMENT

Goal	Objectives	Strategies	Activities
<b>Enhance Corporate Governance and Compliance</b>	Ensure compliance to statutory and regulatory requirements	Partnerships and collaborations	Partnerships: Regulatory Authorities, Communities, County and National Government, Development Partners, Sector and Government Agencies
		Effective legislation that guide the sector reporting lines: Institutional arrangement and governance structure:	Lobby for legislation of institutional structure. E.g. alignment of water act and legislations
	Develop policy guidelines for Company	Departmental strategies policies and procedures in line with corporate guidelines.	Develop corporate policies and procedures in line with corporate guidelines.
			Implementation of ISO 9001:2015 - Quality Management System
	Business Continuity and governance structures	Corporate governance structure	Review the BoD charter
			Formulate Governance management business policy
		Corporate business continuity policy	Reclaim and secure all water and sewerage assets
			Disaster Management
	Enhance Governance Risk and Control Processes	Appropriate risk management process, system and culture embedded within the organization	Automation of governance, risk and compliance software
			Review and align the risk framework to the current Strategic Plan and ISO 3100:2018
Include risk and implication of key decision as standing agenda of the BoD			
Develop a compliance risk monitoring policy and frameworks			
<b>Enhance Work Environment</b>	To have affordable & convenient office space	Ensure an accessible & good working environment	Acquisition of Continuous Monitoring and Auditing system
			Acquisition of new offices
			Construct Sanitary facilities for staff
			Construct Convenience rooms for lactating mothers
			Construction of Modern offices at Kampala rd
Construction of Business Complex at Water stores to accommodate Central Region, and CBD Business Centre			





Goal	Objectives	Strategies	Activities	
			Construction and maintenance of minor facilities and Infrastructure	
<b>Enhanced Organizational Performance</b>	Responsive organization structure	Job evaluation	Review the organization structure	
	Enhanced Staff productivity	Enhancement of staff skills and competencies	Carry out a skills audit	
			Training of staff	
		Staff Optimization	Conduct Employee satisfaction survey	
			Enhance Staff	
Provision of conducive and safe work environment	Audit of work environment			
<b>Change management</b>	Business continuity	Performance Management	Performance Reforms and Cascading	
		Staff motivation	Staff rewards & recognition	
		Staff innovation & creativity	Ensure certification of technical staff i.e. treatment operators and artisans	
		Succession planning	Encourage creativity and innovation	
	Culture change	Culture change program	Knowledge management	Mentorship and coaching
				Carry out culture change training program including identification of change agents
				Team buildings
				Benchmarking/Peer to peer learning

**Table 10: Governance & Institutional Capacity Development**



**THEME 6: ICT & OTHER SUPPORT INFRASTRUCTURE**

Goal	Objectives	Strategies	Activities
<b>Automation of Company processes to enhance efficiencies and effectiveness</b>	To improve existing Oracle ERP e-business suite and database system	Have an updated & efficient ICT systems and related software	Implementation of supply chain and budgeting module in e-business suite
			Implementation of oracle e-business human capital module
			Implement Capacity, Operations, Management & Maintenance Information System (COMMIS)
	To enhance business efficiency through use of technology	Have a current & efficient ICT infrastructure & related software	Implementation of asset management system for water and waste water utilities
			Establish a GIS Centre with full integration of business systems
			GIS Mapping of all water and sewer networks, connections, vendors, meters
			Implementation of basis 2 customer management system
			Implement an audit vault and data guard
			Oracle database system upgrade
			Develop executive dashboard management for all existing systems
			Procure and deploy enterprise risk management system for managing Company enterprise risk
			Acquire audit and continuous monitoring system
Workforce Management system			
To develop and/or acquire quality online monitoring systems to effectively support business growth	Have a current & efficient ICT infrastructure & related software	Deployment of one stop solution for interactions (USSD) and mobile app for customers services	
		Development and implementation of e-bill system	
		Deploy an interactive Company website	
		Roll out real time agency banking platform to manage agencies collection	
		Deployment of LIMS (Lab information management systems)	
		Deployment of SMS gateway system	
		Deploy an Integrated Board Management Solution (IBS)	
		Acquire an electronic Data Management System (EDMS)	
To enhance, upgrade, improve	Have a current & efficient ICT	Data warehouse and business intelligence	
		Training of staff on emerging technologies and newly commissioned software	
		Procurement of online water quality monitoring sensors	
		Deployment of SCADA in water and sewerage infrastructure (supervisory control and data acquisition system)	
			Automate the inlet works
			Implementation of ICT converged infrastructure and virtual desktop environment



Goal	Objectives	Strategies	Activities
	and ensure reliability, efficiency of the Company infrastructure	infrastructure & related software	
	To ensure availability of business systems, ICT infrastructure, database systems and business operations	Have a current & efficient ICT infrastructure & related software	Maintain / upgrade the peripheral data center / secondary data center and requisite peripherals Procurement of 500 desktop computers, 200 laptop computers, 600 No mobile devices Implement the state-of-the-art next generation firewall system and monitoring tools Ensure compliant licenses of all Company learning software Procure and deploy Engineering design aided software (ArcGIS, AutoCAD etc.)
<b>Plant, equipment &amp; motor vehicles-adequate &amp; appropriate plant and equipment</b>	Avail necessary plant, equipment & motor vehicles to operate and maintain the water, sewerage services	Well maintained & efficient plant, equipment & motor vehicle	Acquire 1 No 16,000 litres, 3 No 8,000 litres capacity water tankers, 2 No mobile workshops, 2 No excavators, 1 No flushing unit, 3 No canters, 1 No Exauster, 30 double cabs, 20 single cabs, 50 No motor cycles, 3 No four-wheel drive SUVs,
	Adequate operational and stand by pumps for operation of water & waste water	Well maintained & efficient plant, equipment & motor vehicle	Full operational of a fleet management system
	Produce hydro-power - Replace old and obsolete Hydro turbines at Sasumua	Use available resources and infrastructure to produce hydro-power for use at Sasumua & export excess to grid (KPLC)	Draft specifications/TOR, Preparation of Contract for supply & installation of hydro-turbine, advertise and seek external funding.
<b>Other ICT Infrastructure</b>	Ensure up-to-date support ICT infrastructure	Updating support ICT infrastructure	Regular upgrade and maintenance

Table 11: ICT & Other Support Infrastructure





**THEME 7: FINANCIAL STEWARDSHIP**

Goal	Objectives	Strategies	Activities
<b>Revenue generation</b>	To increase customer base by 25%	Increasing metering coverage	Prompt metering of new customers
	To increase water & sewer revenue by 30%	To increase sewer coverage	Regularize illegal water and sewer connections.
	Alternative sources of revenue	Diversification	Consultancy services Water Academy
	Service delivery sustainability	To ensure pricing covers O+M costs	Carry out tariff review/ indexation
<b>Debt Management</b>	To reduce debt by 50%	Increase collection efficiency	Debt Management Policy review
			Lobby with the NCCG for water clearance and CRB listing
			Engagement of revenue collection agencies (Effective/Reliable)
		Debt authentication	pro-active debt cleans up.
<b>External resource mobilization</b>	To attract funding	To attract Development Partners and donors	Project proposals
			Identification of Development Partners
<b>Financial sustainability</b>	To ensure compliance with statutory tax regulations	Lobby for zero-rating of water and sewerage services	Prepare proposal for zero rating of inputs (water is an essential commodity and basic human right)
<b>Water Levies by other regulators-lobby for capitation</b>	Compliance with payment regulations	Capping of payment levies	Ensure the levies are not increased arbitrary
<b>Water Resource Authority (WRA) levy (50cts per m<sup>3</sup>)</b>	Compliance with payment regulations	Reduction of levy (from 50 cents to 25 cents)	Reduction of levy by 50%

*Table 12: Financial Stewardship*



## PART V

### 5.0 ORGANISATIONAL STRUCTURE TO DELIVER THE PLAN

#### 5.1 Structural Review

Effective human resource management is one of the key facets that is critical for the realization of any organization's mission, vision and key goals. The ability of NCWSC to develop the necessary human resources capacity to address its past weaknesses as well as its threats and to meet the growing demands for its services in the face of rapid technological changes and rising standards of living will be greatly dependent on a sound organization structure.

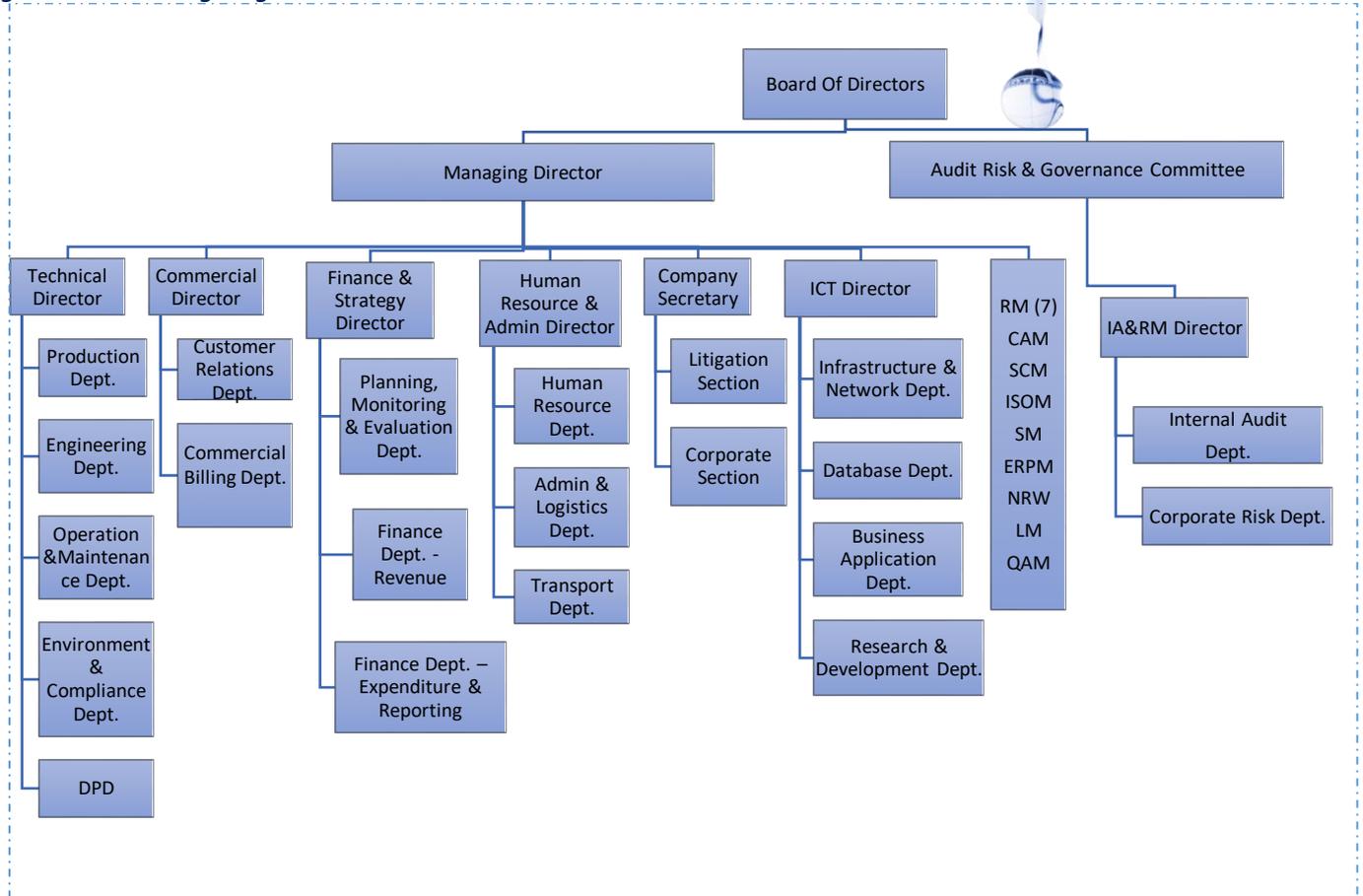
The structure should provide clarity of key roles and responsibilities for key departments and sections. To develop a comprehensive structure for the Company, a detailed Job Evaluation will be conducted to collect critical information on Job descriptions and specifications that will inform the formulation of the organogram.

It is therefore proposed that NCWSC develops and adopts an organizational structure which has the following features:

- i) Rationalized spans of control with an effective governance mechanism.
- ii) Clear support for BoD and MD on key responsibilities for effective sustainability and growth of the Company.
- iii) A structure that promotes innovation, creativity and responsiveness to increasing demand for better service delivery and access to clean water and sanitation services as a basic right.
- iv) The structure should ensure sustainable operations and maintenance costs recovery within optimal staff utilization.

## 5.2 Current Organogram

Figure 7: Current Organogram



## PART VI

## 6.0 FINANCIAL REQUIREMENTS AND SOURCES OF FUNDS

## 6.1 Financial Projections 2019/20 – 2023/24

To implement the plan, the Company will require to raise adequate financial resources to meet the financial requirements as outlined in the implementation matrix as well as meet all its other financial obligations.

## 6.1.1 NCWSC Financial requirements

The total financial requirements for the Company during the plan period are as outlined in the table below;

		Budget by Plan Year KES (Million)					
Financial Year		2019/20	2020/21	2021/22	2022/23	2023/24	Total
<b>Thematic Costs Requirements</b>							
<b>Themes</b>							
Water Sources, Treatment & Distribution	Internal Funding	367	386	631	309	298	1,990
	External Funding	155	4,705	22,133	104,824	10,000	141,816
	<b>Total Requirements</b>	<b>522</b>	<b>5,090</b>	<b>22,763</b>	<b>105,133</b>	<b>10,298</b>	<b>143,806</b>
Waste Water Treatment & Conveyance	Internal Funding	1,190	1,561	1,552	1,370	1,365	7,038
	External Funding	2,581	2,842	3,673	9,158	4,503	22,756
	<b>Total Requirements</b>	<b>3,771</b>	<b>4,403</b>	<b>5,225</b>	<b>10,528</b>	<b>5,868</b>	<b>29,794</b>
Non-Revenue Water	Internal Funding	386	423	718	780	275	1,850
	External Funding	18	240	-	-	250	1,239
	<b>Total Requirements</b>	<b>404</b>	<b>663</b>	<b>718</b>	<b>780</b>	<b>524</b>	<b>3,090</b>
Customer Focus & Stakeholder Engagement	Internal Funding	104	325	337	279	165	1,212
	External Funding	-	-	-	-	-	-
	<b>Total Requirements</b>	<b>104</b>	<b>325</b>	<b>337</b>	<b>279</b>	<b>165</b>	<b>1,212</b>
Governance & Institution	Internal Funding	471	557	759	1,209	1,731	4,777

		Budget by Plan Year KES (Million)					
Financial Year		2019/20	2020/21	2021/22	2022/23	2023/24	Total
Capacity Development	External Funding	-	-	-	-	-	-
	<b>Total Requirements</b>	<b>471</b>	<b>557</b>	<b>759</b>	<b>1,209</b>	<b>1,731</b>	<b>4,777</b>
ICT & Other Infrastructure	Internal Funding	482	405	516	340	215	1,958
	External Funding	80	40	112	48	128	408
	<b>Total Requirements</b>	<b>562</b>	<b>445</b>	<b>628</b>	<b>388</b>	<b>343</b>	<b>2,366</b>
Financial Stewardship	Internal Funding	45	60	50	64	69	288
	External Funding	-	-	-	-	-	-
	<b>Total Requirements</b>	<b>45</b>	<b>60</b>	<b>50</b>	<b>64</b>	<b>69</b>	<b>288</b>
<b>Themes Requirements</b>	<b>Total Internal Funding (A)</b>	<b>3,045</b>	<b>3,717</b>	<b>4,562</b>	<b>4,352</b>	<b>4,118</b>	<b>19,114</b>
	<b>Total External Funding</b>	<b>2,880</b>	<b>7,887</b>	<b>25,967</b>	<b>114,093</b>	<b>14,950</b>	<b>166,507</b>
	<b>Total Plan Requirements</b>	<b>5,925</b>	<b>11,604</b>	<b>30,529</b>	<b>118,446</b>	<b>19,068</b>	<b>185,621</b>
<b>Recurrent Expenditure &amp; CAPEX</b>							
	Staff Costs	5,874	6,168	6,476	6,800	7,140	<b>32,458</b>
	Operations	2,595	2,724	2,861	3,004	3,154	<b>14,337</b>
	Maintenance	518	544	571	599	629	<b>2,860</b>
	Financing Costs	87	91	96	101	106	<b>481</b>
	CAPEX & Other Costs (Depreciation & Amortization)	535	562	590	619	650	<b>2,956</b>
	<b>Total CAPEX &amp; Recurrent Expenditure (B)</b>	<b>9,608</b>	<b>10,089</b>	<b>10,593</b>	<b>11,123</b>	<b>11,679</b>	<b>53,092</b>
	<b>Repayment of Development Loans (C)</b>	<b>-</b>	<b>-</b>	<b>1,140</b>	<b>1,140</b>	<b>1,140</b>	<b>3,420</b>
	<b>Total Internal Requirements (A+B+C)</b>	<b>12,653</b>	<b>13,805</b>	<b>16,295</b>	<b>16,615</b>	<b>16,937</b>	<b>76,306</b>

Table 13: NCWSC Total Financial Requirements 2019-2024 KES 'Million'

### 6.1.2 NCWSC Sources of Funds 2019-2024

To meet the financial requirements during the plan period, the Company has identified the following as the key sources of funds;

Financial Year	2019/20	2020/21	2021/22	2022/23	2023/24	Total
<b>Revenue &amp; Source of Funds</b>						
Water	6,500	7,053	8,447	8,616	8,789	39,405
Sewerage	4,578	4,968	5,950	6,069	6,190	27,754
Meter Rent	176	191	222	226	231	1,045
Miscellaneous	400	434	504	514	524	2,376
Operational Income	11,655	12,645	15,123	15,425	15,733	70,581
<b>Other Sources</b>						
Consultancy Services			5	7	10	22
Loans						
Water Academy				5	5	10
Regularize Illegal Water & Sewer Connections	50	150	150	150	150	650
Debt Collection	150	210	221	232	243	1,055
External Funding (Donors)	800	800	800	800	800	4,000
<b>Total Revenue</b>	<b>12,655</b>	<b>13,805</b>	<b>16,298</b>	<b>16,619</b>	<b>16,942</b>	<b>76,318</b>

Table 14: NCWSC Sources of Funds 2019-2024 KES 'Million'

### 6.1.3 Financial Projection Summary 2019-2024

Based on the total financial requirements and identified sources of funds, the following is the summary of the financial projections for the plan period.

Financial Year		2019/20	2020/21	2021/22	2022/23	2023/24	Total
<b>Total Revenue</b>		<b>12,656</b>	<b>13,805</b>	<b>16,298</b>	<b>16,619</b>	<b>16,942</b>	<b>76,318</b>
<b>Themes Requirements</b>	<b>Total Internal Funding</b>	<b>3,045</b>	<b>3,717</b>	<b>4,562</b>	<b>4,352</b>	<b>4,118</b>	<b>19,114</b>
	<b>Total External Funding</b>	<b>2,880</b>	<b>7,887</b>	<b>25,967</b>	<b>114,093</b>	<b>14,950</b>	<b>166,507</b>
	<b>Total Plan Requirements</b>	<b>5,925</b>	<b>11,604</b>	<b>30,529,156</b>	<b>118,446</b>	<b>19,068</b>	<b>185,621</b>
<b>Recurrent Expenditure &amp; CAPEX</b>							
<b>Total CAPEX &amp; Recurrent Expenditure</b>		<b>9,608</b>	<b>10,089</b>	<b>10,593</b>	<b>11,123</b>	<b>11,679</b>	<b>53,092</b>
<b>Repayment of Development Loans</b>		-	-	<b>1,140</b>	<b>1,140</b>	<b>1,140</b>	<b>3,420</b>
<b>Total Sources</b>		<b>12,655</b>	<b>13,805</b>	<b>16,298</b>	<b>16,619</b>	<b>16,942</b>	<b>76,318</b>
<b>Total Internal Requirements</b>		<b>12,654</b>	<b>13,805</b>	<b>16,295</b>	<b>16,615</b>	<b>16,937</b>	<b>76,306</b>
<b>Surplus/Deficit</b>		<b>1</b>	<b>0</b>	<b>3</b>	<b>3</b>	<b>5</b>	<b>12</b>

Table 15: Financial Projection Summary 2019-2024 KES 'Millions'

## PART VII

### 7.0 MONITORING AND EVALUATION SYSTEMS

#### 7.1 Purpose of Monitoring, Evaluation, Reporting and Learning

A monitoring and evaluation systems is necessary for ensuring that NCWSC has a timely, focused, objective and evidence-based information gathering framework on the performance of its planned activities. It also requires timely observation, measurement, feedback, and a guidance system. In this regard, NCWSC will, as a matter of priority, establish an effective monitoring and evaluation system consisting of:

- i. Appropriate performance indicators
- ii. Data collection and reporting system
- iii. Evaluation and review mechanism

An effective monitoring and review mechanism produce data and information relating to the carrying out of an organisation's activities and the extent to which targets are being met. Where a variance is registered between planned and actual accomplishment, a basis is provided for appropriate remedial action to be taken by the management and, where necessary, by the relevant committees of the BoD with a view to ensuring that the goals and objective are realised.

#### 7.2 Current M&E Framework

The current Monitoring, Evaluation and Reporting (MER) tool was designed to capture the fifty-five (55) key performance indicators which were to be tracked during the plan period. This framework was used to track both financial and non-financial implementation activities on an M&E committee constituted by representatives from all directorates. M&E assessments reports are coordinated by Planning Monitoring and Evaluation Department (PMED) and are shared with the BoM and subsequently to the BoD. The strategic plan was also reviewed by an independent external reviewer.

The current M&E tool does not adequately capture all the aspects of the Strategic Plan and lacks a clear guide on the performance matrix to monitor progress and to act as a control mechanism.

### 7.3 Proposed MER & L and Reporting Framework

To effectively Monitor and Evaluate implementation of the strategic plan based on the dynamics of NCWSC environment; it will ensure consistency, accountability, and effective timely monitoring of key activities ingrained in the plan. The current M& E framework will be reviewed to the new ME R&L framework as shown in the figure below.

<b>Theme:</b> <b>Strategic Goal:</b> <b>Strategic Objective:</b> <b>Key Strategy:</b>														
	Key activities	OVIs	Performance					Budget Allocation					Remarks	
			Annual Target	Quarterly Target	Actual	YTD actual	Variance (%)	Annual Target	Quarterly Target	Actual	YTD actual	Variance (%)		
1														
2														
3														

The Company will integrate the proposed tool into its performance management systems and also realign the existing reporting mechanisms to incorporate feedback for remedial actions and key learnings from implementation challenges and successes.

To ensure ownership, PMED will automate the MER&L tool and cascade it to the entire organization for effective operationalization and reporting into the Company’s dashboard reports.

To aid in tracking key service delivery standards as required by the industry regulator, the following service delivery standards and sector benchmarks will be captured and integrated in the Company’s MER&L framework;

KPI Cluster	Indicators		Sector Benchmarks			
			Good	Acceptable	Not Acceptable	
Quality of Service	1	Water Coverage, %		>90%	80-90%	<80%
	2	Drinking Water Quality, %		100%	>98%	<98%
	3	Hours of Supply, No.	Population >100,000	21-24	16-20	<16
	4	Sewer Coverage, %		>80%	50%-79%	<49%
	5	Sanitation Coverage, %		>100%	99%-100%	<99%
Economic Efficiency	6	Personnel Expenditure as Percentage of O+M Costs, %	Large and Very Large Companies	<20%	20-30%	>30%
	7	O+M Cost Coverage, %		≥150%	100-149%	≤99%
	8	Revenue Collection Efficiency, %		>95%	95-85%	<85%
Operational Sustainability	9	Non-Revenue Water, %		<20%	20-25%	>25%
	10	Staff Productivity (Staff per 1000)	Large and Very Large Companies	<5	5-8	>8
	11	Metering Ratio, %		100%	95-99%	<95%

Table 16: Sector Benchmarks on Service Delivery Standards

Impact Assessment Report Issue 11/2019.

Source: WaSREB

## PART VIII

### 8.0. ASSUMPTIONS AND RISKS

#### 8.1 Key Assumptions

The Company is fully owned by the County Government of Nairobi and its assets are held by Athi Water Works Development Agency (AWWDA) which is responsible for the development of key infrastructure within the County hence this plan was developed with the following key assumptions;

- i. The Nairobi City County Government will continue to support the Company to implement the plan by formulating policies and enacting county by-laws that will support key programmes and projects being pursued by the Company.
- ii. The Company will continue enjoying the Development Partners' support it has received in the past
- iii. The goodwill to share water resources with the neighbouring counties will continue
- iv. The Nairobi City County Government will implement policies aimed at controlling and managing mushrooming of Informal Settlements.
- v. Customers enjoying water and sewerage services will continue paying.
- vi. The tariff review will be rolled out by the second half of 2020/21.
- vii. The weather patterns will be favorable.

## 8.2 Main Risks

Some of the risks that are inherent with the plan are;

- ✓ **Declining resource base;** donor apathy; inadequate funding by the NCCG and National Government.
- ✓ **Climate Change;** reduced raw water due to erratic weather pattern.
- ✓ **Poor Urban Planning;** inadequate enforcement of Physical Planning Act.
- ✓ **High Population Growth;** rural-urban migration; mushrooming of Informal Settlements
- ✓ **Declining revenue;** customer apathy; water cartels; inadequate mechanism to enforce disconnection measures.
- ✓ **Disruption of ICT operations;** cyber insecurity and technological changes
- ✓ **Huge Debts;** growing debts due to increased default of payments by customers.

## ANNEXES

ANNEX 1: 4<sup>th</sup> Strategic Plan KPIs' Implementation Status

S. No.	Key Performance Indicators	Unit of measure	Actual Performance Per Year					5 YEAR CUMULATIVE PERFORMANCE			BPO	Remarks on Performance
			2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	Actual Cumulative Performance	Plan Period Target	% perf.		
1	Water quality compliance level-Distribution (Residual chlorine)	No.	61,560	66,440	61,156	67,334	50,873	307,363	74,669	412%	QAM	Subsequent inclusion of sampling at Gigiri reservoir which is carried out every 30 minutes as part of the distribution network led to the percentage increase.
2	Number of samples collected-Distribution (Physio-chemical-pH, color, Turbidity)	No.	64,292	69,055	66,160	67,177	15,406	282,090	74,669	378%	QAM	Subsequent inclusion of monitoring of water quality at Gigiri reservoir which is carried out every 30 minutes as part of the distribution network led to the percentage increase.
3	Level of recurrent costs as a % of revenue	%	96.30%	113%	103%	110%	106%	106%	75%	141%	FD	Expenditure may be incurred on accrual basis
4	Water quality compliance level-plants (Residual Chlorine)	No.	94,223	104,309	107,923	116,810	126,053	640,403	455,425	141%	QAM	Performance increased as a result of increased mobilization of resources in the form of more personnel to carry out quality and process control.
5	No. Public prepaid meter installation in Informal Settlements	No.	4	63	83	39	58	247	200	124%	ISM	Company supported by Grundfos and WSUP Out of the 247 total, 234 No. are Susteq Dispensers Supplied by Maji milele while 13 are Elster Kent Dispensers
6	No of sewer connections Informal Settlements and Pour-flash converted into sewer system connections in the Informal Settlements under OBA project	No.	0	1977	3361	4172	2035	11545	9363	123%	ISM	Compensated by OBA project by the World Bank that enhanced Pour-flash converted into sewer system connections in the Informal Settlements. The funding of the OBA project by the World Bank facilitated good performance of hence meeting the target
7	Water quality compliance level-plants (Physio-chemical-pH, color, Turbidity)	No.	97,464	103,174	105,378	116,821	126,060	548,897	455,425	121%	QAM	Performance increased as a result of increased mobilization of resources in the form of more personnel to carry out quality and process control.
8	Improved efficiency in quality control process	%	100%	88%	133%	99%	99%	104%	100%	104%	QAM	Performance increased as a result of increased mobilization of resources in the form of more personnel to carry out quality and process control.



S. No.	Key Performance Indicators	Unit of measure	Actual Performance Per Year					5 YEAR CUMULATIVE PERFORMANCE			BPO	Remarks on Performance
			2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	Actual Cumulative Performance	Plan Period Target	% perf.		
9	Revenue collection level	%	100%	97%	102%	102%	100%	100%	98%	102%	FMR/RMs	The collection efficiency level is good but we are endeavoring to achieve even better levels through focusing on individuals taking full responsibility on collections
10	Water quality compliance level - Distribution (Physio-Chemical-pH, color, Turbidity)	%	100%	99%	100%	99%	97%	99%	100%	99%	QAM	Performance within the benchmark of <95%
11	water quality compliance level (Total Coliform and <i>E. coli</i> )	%	95%	99%	100%	99%	99%	98%	100%	98%	QAM	Performance within the benchmark of <95%
12	Recurrent Expenditure (OPEX)	Kshs Bn	7.056	9.06	9.954	8.96	9.25	44.28	45	98%	FM-E&R	Almost within target
13	Water quality compliance level-plants (Total coliform and <i>E. coli</i> )	%	100%	100%	100%	99%	90%	98%	100%	98%	QAM	Performance within the benchmark of <95%
14	Level of employees' satisfaction	%	79%	75%	77%	77%	78%	77%	80%	96%	HRM	Target almost met. Staffs welfare issues continuously being improved
15	Water quality compliance level-Distribution (Residual chlorine)	%	91%	96%	93%	96%	98%	95%	100%	95%	QAM	Performance affected mainly by periodic use of powder chlorine instead of gas chlorine.
16	Revenue Collected	KShs. Bn	6.73	8.04	8.544	8.17	8.739	40.22	44	92%	FMR/RMs	The Company has embarked on efforts focusing on accounts that have been billed on actual but not making any payments to endeavor to bring them on the paying platform.
17	Water quality compliance level-Plants (Residual chlorine)	%	86%	90%	93%	95%	97%	92%	100%	92%	QAM	Performance affected mainly by periodic use of powder chlorine instead of gas chlorine.
18	level of public confidence	%	60%	67%	82%	83%	74%	73%	80%	91%	CAM	Performance is usually affected by intermittent water supply
19	Water quality compliance level-plants (Physio-chemical-pH, color, Turbidity)	%	88%	89%	91%	91%	96%	91%	100%	91%	QAM	Performance affected mainly by low pH level of water at Kikuyu springs.
20	Level of adherence to annual budgets	%	87%	100%	83%	82%	102%	91%	1	91%	FM-E&R	Usually the CAPEX is affected when revenue targets are not met especially due to reduced water supply
21	Level of automation	%	83%	80%	84%	91%	100%	88%	100%	88%	ICTD	ICT is highly advancing but the Company is catching up
22	Business systems continuity level	%	40%	85%	100%	100%	100%	85%	100%	85%	ICTD	Both on and off-site disaster recovery systems have been put in place



S. No.	Key Performance Indicators	Unit of measure	Actual Performance Per Year					5 YEAR CUMULATIVE PERFORMANCE			BPO	Remarks on Performance
			2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	Actual Cumulative Performance	Plan Period Target	% perf.		
23	Revenue base (Billing)	Bn	6.72	8.27	8.36	8.03	8.75	40.13	49	82%	CBM/RMS	This is affected by the volume of water produced as in row 32
24	Staff performance management	%	65%	70%	80%	80%	88%	77%	94%	81%	DHRA	Performance contracting and appraisals being cascaded to all staffs
25	Customer satisfaction level	%	76%	73%	81%	60%	76%	73%	90%	81%	CRM	The inability to supply water 24/7 affects customer satisfaction the most
26	Training & Development	No.	3,087	2,600	3,215	1361	1106	11,369	14,000	81%	HRM	Usually affected by revenue shortfalls
27	Sewer Connections		200,107	203,185	205,621	216,721	223,678	223,678	280,000	80%	CBM/RMs	This was attributed to the fact that the sewer laterals were not developed to net the customers in areas with trunk sewers
28	Vol. of water sold	m3/day	341,863	333,233	305,014	292,383	309,589	1,582,082	1,983,506	80%	CBM	This was attributed to the low volume of water treated as given in row 32
29	Number of staff per 1,000 water and sewer connections	No.	5.99	6.39	6.98	6.81	6.5875	6.55	8	79%	DHRA	Business being grown while employment has generally been frozen
30	Total Connections		487,337	494,457	500,155	521,662	535,212	535,212	680,000	79%	CBM/RMs	A factor of the above two immediate items
31	No of Ablution blocks constructed in the Informal Settlements	No.	32	3	3	1	1.68	41	52	78%	ISM/EM	There was shift to the individual household sewer connections hence reduced the construction of the Ablution blocks. Which was part of the OBA project
32	Customer base (Water connections)	No.	287,230	291,272	294,534	304,941	311,534	311,534	400,000	78%	CRM/RMs	The introduction of multi dwelling tariff which allows customer with more than 20 units in a flat to only create one account to serve the more than 20 units.
33	Increased treated water Volume	m <sup>3</sup> /day	530,607	547,410	496,888	473,647	493,582	2,542,133	3,307,000	77%	PM	2. Kigoro water treatment plant under AWWDA was not completed
34	Volume of water abstracted	m <sup>3</sup> /day	558,229	575,908	522,744	507,509	530,550	2,694,940	3,523,000	76%	PM	1. There were major droughts from 2016 to mid-2018 affecting storage in dams
35	Water quality compliance level - Distribution (Total coliform and E. coli)	No.	4,857	6,337	6,355	5,501	5031	28,081	37,274	75%	QAM	The target was not met due to: implementation of equitable distribution program (supply changes in Eastern region); prioritization of customer water quality complaints and confirmatory tests over routine monitoring when cases arise.
36	Length of sewers laid in the Informal Settlements	KM	10.19	3.08	11.13	7.35	4.70	36	50	73%	ISM/EM	The drop in revenue due to prolonged drought for the last five years when the projects were being carried out affected the budget allocation for the activity hence not able to be met 100%

S. No.	Key Performance Indicators	Unit of measure	Actual Performance Per Year					5 YEAR CUMULATIVE PERFORMANCE			BPO	Remarks on Performance
			2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	Actual Cumulative Performance	Plan Period Target	% perf.		
37	Hours of Supply	Hours/day	19.12	17	14	15.63	16	16.33	24	68%	O&M	Demand higher than supply hence equitable distribution of the available water
38	Vol. of water transmitted	m <sup>3</sup> /day	500,600	53,000	496,888	473,646	493,582	2,017,716	3,062,000	66%	PM	3. Some envisaged strategies were not implemented: Expansion of Ngethu treatment and new raw water transmission lines
39	level of water demand met	%	67%	71%	62%	63%	65%	66%	100%	66%	O&M	Installed capacity less than the demand in the city (deficit of approximately 230,000m <sup>3</sup> /d)
40	Water quality compliance level-plants (Total coliform and E. coli)	No.	1,311	1510	1,875	1,772	1915	8,383	13,480	62%	QAM	Performance affected by Sasumua Treatment works which had limited capacity to test for total coliform and <i>E. coli</i> .
41	Water Connections in Informal Settlements Under including those under OBA Project	No.	166	1,200	3,073	5,015	2,615	12,069	20,000	60%	ISM/EM	Introduction of PPDs compensated shortfall in individual connections. The funding of the OBA project by the World Bank enhanced performance
42	Volume of wastewater treated and disposed	M <sup>3</sup>	63,039	76,170	286,748	121,311	193018	740,286	1,250,000	59%	E&CM	Due to non-treatment sewage at Kariobangi
43	Improve level of Brand Equity	%	35%	40%	50%	80%	85%	58%	100%	58%	CAM	Affected by financial limitations on part of the Company
44	Length of water pipelines extended in formal areas	KM	6.5	4.5	3	10.6	7.31	31.93	60	53%	EM	Some projects for this period are still ongoing hence delay in completing on time and delay for the payment of works due to reduced revenue by drought effect which eventually made funding of the projects reduced
45	Volume of wastewater conveyed	M <sup>3</sup>	78,000	73,255	234,587	93,054	176,424	655,320	1,250,000	52%	E&CM	Inadequate laterals
46	Length of sewers laid in Formal areas	KM	2.91	4.92	3.87	10.39	3.95	26	50	52%	EM	The Prolonged drought over the period under the review affected the revenue which in the long run affected funding of the projects hence low performance
47	NRW (physical losses)	%	19.6%	23%	20%	10.90%	23%	19.3%	10%	52%	NRW	Level of physical losses estimated at 9.7% during the period. NRW Reduction Action Plans developed by NCWSC through Seureca required replacement of 283,930 Kms old water pipelines in order to lower physical losses from 10.45% to 5.59% in 5Yrs. Performance was 156.92 Km (inclusive of 112.35 km laid lines in informal areas) which translated to 0.055%

S. No.	Key Performance Indicators	Unit of measure	Actual Performance Per Year					5 YEAR CUMULATIVE PERFORMANCE			BPO	Remarks on Performance
			2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	Actual Cumulative Performance	Plan Period Target	% perf.		
48	Combined Calculated NRW	%	35.6%	39%	38%	38.20%	36.4%	37.4%	16%	43%	NRW M	According to baseline study conducted during the period, the overall NRW of 40.35% was targeted to be reduced to 18.5% over a 5 Yrs period upon implementation of the detailed NRW reduction action plans.
49	NRW ((production-billing)/(production))	%	35.6%	39%	38.61%	38.2%	36.4%	37.6%	16%	43%	NRW M	As above comments
50	Raising of external funding (Loans, Grants and funding from National Government)	Kshs Bn	0.97499	0.283468	1.166	2.568018	2.66	7.6	20	38%	OPM	These funds include funding of projects from the National Government through agencies like WSTF, AWWDA & Kenya Urban Roads Authority and loans and grants from Development Partners such as WB, AfD, AFDB
51	No. of water kiosks constructed in Informal Settlements	No.	8	6	2	1	1	18.11	50	36%	IS/EM	There was shift to the individual household connections hence reduced the construction of the Kiosks and also the introduction of the water ATMS in place of the Kiosks
52	NRW (Commercial losses)	%	16.0%	16%	18%	27.30%	13%	18.2%	6%	33%	NRW M	Commercial losses were 27.7% during the period. The Seureca consultancy required reduction of commercial losses from 29.9% to 12.91% over a 5 Yr. period upon doing the following NRW reduction action plans (1) Customer data clean-up (2) Replacement of old and faulty meters (3) Adoption of smart technology in meter reading, like MFA (4) Zoning of regions (5) Replacement of mechanical meters with AMRs
53	Reduce the level of accounts payables	Kshs Bn	0.296	0.499	0.086	0.16	-0.223	0.82	3	31%	FM-C&R	These have progressively been reduced
54	Length of water lines laid in Informal Settlements	KM	16.92	16.92	17	11.56	17.98	80.4	300	27%	IS/EM	The Prolonged drought over the period under review affected the revenue which in the long term affected funding of the projects hence low performance
55	Level of compliance to regulatory requirements on wastewater management	%	0%	0%	70%	0%	0%	14%	100%	14%	C&CM	Most parameters at Ruai are met but Kariobangi affects the overall.
56	Length of water pipelines rehabilitated in formal areas	KM	4.27	6.23	23.93	4.15	5.995	44.58	352	13%	EM	Some projects for this period are still ongoing hence delay in completing on time and drought effect that have affected the funding of the project

S. No.	Key Performance Indicators	Unit of measure	Actual Performance Per Year					5 YEAR CUMULATIVE PERFORMANCE			BPO	Remarks on Performance
			2014/2015	2015/2016	2016/2017	2017/2018	2018/2019	Actual Cumulative Performance	Plan Period Target	% perf.		
57	Reduce the accounts receivables	Kshs Bn	-0.358	0.179	0.353	-0.368	0.485	0.29	5	6%	FMR/RMs	Nairobi and Kiambu County Governments and the Water Services providers have accumulated debts of about Kes.500 million which is contributing heavily to the account receivables.
58	water reservoir cleaned	No.	0	0	2	0	0.00	2.00	40	5%	O&M M	Financial limitations on the part of the Company
59	Construction of reservoirs	No.	0	0	0	0	0.00	0.00	2	0%	EM	The projects were shifted from the period in review as this are the projects which are to be carried out in the new period in line with the new water resources being developed
60	Swabbing of transmission and distribution pipelines	KM	0	0	0	0	0.00	0.00	164	0%	O&M M	Financial limitations on the part of the Company.
61	Amount of Power harnessed	MW	0	0	0	0	0.00	0.00	1	0%	O&M M	Financial limitations on the part of the Company.
<b>OVERALL IMPLEMENTATION STATUS LEVEL</b>										<b>80%</b>		

## ANNEX 2: National and NCWSC Key Performance Indicators

Key Performance Indicators	National Performance Level					NCWSC				
	2014/15	2015/16	2016/17	2017/18	Trend	2014/15	2015/16	2016/17	2017/18	Trend
Water coverage, %	53	55	55	57	↑	80	81	81	80	↓
Drinking Water Quality, %	92	94	94	95	↑	95	93	93	93	→
Hours of supply, hrs/day	18	17	14	13	↓	18	18	6	6	→
Non- Revenue Water, %	43	43	42	41	↑	39	39	38	38	→
Metering Ratio, %	89	91	93	95	↑	94	96	100	100	→
Staff productivity, Staff per 1,000 connections	7	7	7	7	→	5	6	6	6	→
Personnel expenditure as % of O+M Cost, %	42	45	46	50	↓	50	52	56	61	↓
Revenue Collection Efficiency, %	93	96	100	94	↓	91	100	104	96	↓
O+M Cost Coverage, %	99	100	102	99	↓	105	104	105	97	↓
Sewerage Sanitation Coverage, %	16	15	16	16	→	46	48	48	50	↑
Sanitation Coverage, %	-	-	-	80	N/A					
Sector Benchmark:    Good    Acceptable    Not acceptable    Benchmark varies 										

Source: 11<sup>th</sup> Water Sector Impact report 11/2019, WASREB

### ANNEX 3: Implementation Matrix

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding		
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External	
<b>WATER SOURCES, TREATMENT, TRANSMISSION AND DISTRIBUTION</b>																				
Raw water inlets-to meet the demand for water within service jurisdiction	Ensure efficient functionality of inlet works by rehabilitation, upgrading and continuously maintaining	Have a well-maintained intake for efficiency	Desilting Mwagu, Sasumua and Kikuyu Springs intakes	Reduced turbidity and increased flows	TD	Mwagu, Sasumua, Chania		Mwagu, Kiama, Kikuyu Springs				135,000	-	150,000	-	-	285,000	285,000		
			Bush clearing for Kiama, Mwagu and Sasumua intake works	Ease of access and absence of overgrown vegetation	PM	Sasumua	Sasumua	Sasumua	Sasumua	Sasumua		100	120	140	160	180	700	700		
			Fencing of Mwagu and Sasumua inlet works	Fencing put in place and reduce cases of intrusion.	EM		Sasumua, Mwagu						-	20,000	-	-	-	20,000	20,000	
			Construction of coffer dam upstream of Mwagu intake	Coffer dam constructed	TD			1					-	-	100,000	-	-	100,000	100,000	
			Annual maintenance of Mwagu, Kimakia, Sasumua and Kikuyu Springs intakes	Accessible and functional intakes	O&MM	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous		5,000	5,000	5,000	5,000	5,000	25,000	25,000	
			Enhanced surveillance of the Mwagu, Sasumua, Kimakia and Kikuyu	Deployment of electronic surveillance (Drones and CCTVs)	SM		Contract	Contract							50,000	50,000	-	-	100,000	100,000



Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding				
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External			
			Springs intakes	for daily monitoring																		
Raw and treated water transmission and distribution mains to meet 950,000 M <sup>3</sup> per day production capacity	Ensure transmission and distribution of 100% of water	Have a well-maintained transmission and distribution mains	Lay 10Km of DN 1000 raw water pipeline Maragwa 4 dam & Thika dam to Ndunyu Chege and	Increased flows	EM							-	400,000	400,000	-	-	800,000		800,000			
			Lay 50Km of DN 1000 treated water pipeline between Ndunyu Chege Water Treatment Plant to Gigiri		EM							-	-	-	1,000,000	1,000,000	2,000,000		2,000,000			
			Lay 17 Kms of DN 800 treated water line from Kwamaiko - Ngethu and		EM		Contract (External Resources)								-	800,000	-	-	-	800,000		800,000
			Lay 1 Km of DN 800 raw water line at Sasumua		EM										-	-	80,000	-	-	80,000		80,000
			Upgrading and extension of various size pipelines; northern, central and southern regions-25		EM				Contract	Contract					115,000	120,000	130,000	140,000	150,000	655,000		655,000



Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding		
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External	
			km and N. Eastern, eastern, and western regions 45.7 km,																	
			Installation of isolation valve to the pump house at Kabete	Isolation valve installed	O&M M	Kabete pump house						1,500	-	-	-	-	1,500	1,500		
		Construct 294.42 Kms of new transmission and distribution mains, rehabilitate/renew the existing dilapidated raw, treated and distribution water transmission lines, investments to 2021 demand horizon and maintenance of existing	Lay 4Km of DN 800	Improved / increased water flows and improved water quality	EM		Contract	Contract	Contract	Contract		-	40,000	40,000	40,000	40,000	160,000		160,000	
			Lay 9.21Km of DN 600		EM		Contract	Contract	Contract	Contract			-	50,000	100,000	150,000	-	300,000		300,000
			Lay 13.1Km of DN 500		EM		Contract	Contract	Contract	Contract			-	100,000	150,000	150,000	120,000	520,000		520,000
			Lay 25.84Km of DN 300		EM			Contract	Contract				-	-	125,000	125,000	-	250,000		250,000
			Lay 7.66Km of DN 250		EM		Contract	Contract	Contract				-	-	100,000	100,000	100,000	300,000		300,000
			Lay 25.34Km of DN 200		EM		Contract	Contract					-	50,000	50,000	50,000	-	150,000	37,500	112,500
			Lay 14.42Km of DN 150		EM				Contract				-	-	-	15,000	-	15,000	3,750	11,250
			Lay 5.32Km of DN 1400		EM			Contract					-	-	100,000	150,000	50,000	300,000		300,000
			Lay 7.25Km of DN 1200		EM			Contract					-	100,000	100,000	100,000	70,000	370,000		370,000
			Lay 1.85Km of DN 1000		EM				Contract				-	-	-	100,000	-	100,000		100,000

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding		
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External	
		raw water transmission, treated water transmission and distribution mains	Lay 0.95Km of DN 700		EM			Contract	Contract	Contract		-	-	40,000	-	300,000	<b>340,000</b>		<b>340,000</b>	
			Lay 1.54Km of DN 400		EM				Contract	Contract		-	-	30,000	-	-	<b>30,000</b>		<b>30,000</b>	
													-	-	-	-	-			
			Zone 3n increase Uthiru reservoir capacity by 16,000 m <sup>3</sup> and Kyuna by 1000 m <sup>3</sup>					Contract	Contract				-	-	-	150,000	150,000	<b>300,000</b>		<b>300,000</b>
			Regular maintenance of raw, treated and distribution mains, chambers, marker posts and appurtenances	Reduced leaks and bursts, efficient system and increased revenue	O&MM	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous		10,000	15,000	20,000	20,000	20,000	<b>85,000</b>	<b>85,000</b>	
		Land acquisition for wayleaves	Clearing 100kms wayleaves	Reduce number of leaks & bursts and increase accessibility			TD		Contract	Contract	Contract	Contract		-	20,000	20,000	20,000	20,000	<b>80,000</b>	<b>80,000</b>
			Demarcate & register 100kms of way-leaves at the survey of Kenya						Contract	Contract	Contract	Contract		-	30,000	30,000	30,000	30,000	<b>120,000</b>	<b>120,000</b>
		Maintenance of service reservoirs	Cleaning of service reservoirs	Improved flows and maintain quality of water	O&MM	Clean Gigiri reservoirs	Clean Kabete reservoirs	Clean Loresho reservoir & tank, Uthiru, Dagorreti & Kasarani	Clean Kiambu reservoir	Clean remaining tanks and reservoirs		10,000	10,000	10,000	10,000	10,000	<b>50,000</b>	<b>50,000</b>		

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			Additional pumping stations at Kyuna, Gigiri, Kabete and Serena	Increase water flows	O&MM			Contract	Contract			-	-	100,000	100,000	-	200,000		200,000
Water treatment plants- to meet the 2024 1 million M <sup>3</sup> demand for water within our service jurisdiction	Ensure 97% raw water received at the plants is treated to the acceptable standard	Optimization of water treatment plants	Construction of 1 No clarifiers and 6 No filtration units for phase 2 at Ngethu treatment works	High operation efficiency	TD		Contract	Contract			-	1,500,000	1,500,000	-	-	3,000,000		3,000,000	
			Recycling of filter back wash water	Increase in production	TD		Consultancy	Contract	Contract			-	107,000	100,000	100,000	-	307,000		307,000
			Upgrade the treatment plants to increase water quantity	Increased water quantity by 40,000m <sup>3</sup> per day	EM			Upgrade Kabete treatment plant	Upgrade Sasumua treatment plant			-	-	50,000	50,000	-	100,000		100,000
			Construct of a modern water laboratory		EM	Complete Sasumua lab	Ruai	Ngethu	Kariobangi			2,000	5,000	5,000	5,000	-	17,000	17,000	
Develop new water sources	Increase water production from the current 525,000 m <sup>3</sup> per day to 950,000 m <sup>3</sup>	Engage the National Government for fast tracking of project initiation, and or completion	Completion of Northern collector 1 which will contribute 140,000m <sup>3</sup> /day by Dec 2020	Completed projects, Water volume produced	MD			140,000m <sup>3</sup> /day			140,000 m <sup>3</sup> /day	1,500	1,500	18,300,000	-	-	18,303,000	3,000	18,300,000
			Construction of Maragua 4 dam and South Mathioya	Completed dams and raw water transmission line,	MD				228,096m <sup>3</sup> /day	228,096 m <sup>3</sup> /day	1,000	2,000	2,000	61,300,000		61,305,000	5,000	61,300,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
	per day by June 2024		water transfer tunnel, treatment plant(s)	additional water volume produced															
			Develop Northern Collector 2 to sustain the 2 dams (Maragua Dams) - 120,096 m <sup>3</sup> /day	Completed project, Water volume produced	MD				120,096m <sup>3</sup> /day	120,096 m <sup>3</sup> /day	1,000	1,000	1,000	1,000	8,000,000	8,004,000	4,000	8,000,000	
			Additional new DN 800 water pipeline from Matara to Ngethu by constructing a 6.5 km pipeline.	Completed new pipe line, raw water volume transmitted	MD			6.5 km pipeline,			1,000	130,000	130,000			261,000	1,000	260,000	
			Increase treatment units (Clarifiers & filters) at Ngethu.	Water volumes produced	MD			Volume produced			1,000	500,000	500,000	-	-	1,001,000	1,000	1,000,000	
			Construct 20 km DN 800 pipeline for treated water from Ngethu to Kwa Maiko and connect it to the existing DN 900 line to Gigiri, which will increase	20 km pipeline completed; volume of water transmitted	MD		50,000m <sup>3</sup> /day			50,000 m <sup>3</sup> /day	1,000	800,000		-	-	801,000	1,000	800,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			flow by 50,000m <sup>3</sup> /day																
			Construction of 300 million m <sup>3</sup> Ndarugu dam and a treatment plant with a yield of 216,000 m <sup>3</sup> / day	Feasibility report, Approved designs	MD				Report and designs			1,000	1,000	1000	41,000,000	-	41,003,000	3,000	41,000,000
		Drilling of boreholes	Drilling boreholes	Number of boreholes drilled	EM	Lot 1 – Mihang’o, Utawala, Ruai, Kware Ward, Dandora, Kayole Police station. Lot 2 – Mugumoini, Karen C, Kenyatta Market, Riruta, Gatina, South B	4	4	4	4	16	40,000	20,000	20,000	20,000	20,000	120,000		120,000
Ensure effective and sustainable management of water sources	Monitor water quality within the catchment areas	Compliance to Water Quality Regulations 2006	Quarterly Sampling and testing for all sources	Quarterly water testing reports	QAM						continuous	5,000	5,000	5,000	5,000	5,000	25,000	25,000	
			Acquire equipment for monitoring of silt levels at the intakes and	Silt level Reports	PM							Annual	5,000	-	-	-	-	5,000	5,000

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			water sources																
To sustain catchment areas	Environmental conservation through stakeholder engagement (e.g. Upper Tana Nairobi Water Fund (UTNWF))		Establish nurseries in all the water sources	Number of seedlings	PM	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000	2,000	2,000	2,000	2,000	2,000	10,000	10,000	
			Tree planting and other conservation activities	Number of trees planted and grown to the second year	PM	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,000,000	20,000	20,000	20,000	20,000	20,000	100,000	100,000	
			Hold stakeholder's engagement forums	Number of forums	PM	2	2	2	2	2	10	500	500	500	500	500	2,500	2,500	
			Engage relevant stakeholders for enforcement of key environmental laws																
Development and maintenance of minor water infrastructure	Enhance minor water infrastructure	Development and maintenance of minor water infrastructure	up-to-date infrastructure	EM	Regular maintenance		102,500	107,625	113,006	118,657	124,589	566,377	566,377						
Ensure effective and sustainable water	Enhance process and quality control	Compliance to Drinking Water Quality Standards	Equip and resource the laboratory with appropriate tools, equipment	No. of new equipment procured	QAM	2					Annual	20,000	20,000	20,000	20,000	20,000	100,000	100,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
treatment	systems	(KEBS 2018)	and lab chemicals																
			On-site chlorine production	no. of operational onsite chlorination plants	QAM	2	2	2	2		8	4,000	4,000	4,000	4,000	-	16,000	16,000	
			Implementation of water safety plan	Available implemented framework	QAM							10,000	10,000	10,000	10,000	10,000	50,000	50,000	
			Research & implement new water treatment chemicals and technologies	No. of new water treatment chemicals and technologies implemented	QAM		1			1		-	5,000	-	-	5,000	10,000	10,000	
			Accreditation of Blue water laboratories to ISO17025:2018	Accreditation certificate	ISO M			1				-	-	20,000	-	-	20,000	20,000	
			Establish Chlorine Boosting stations	No. of Chlorine boosting stations established	QAM		5	1	1	1	8	-	10,000	2,000	2,000	2,000	16,000	16,000	
			Liquid chlorine dosing system installation	A functional dosing system	QAM	Sasumua, Kabete						14,000	-	-	-	-	14,000	14,000	
			Installation of online Blue water monitoring devices	Installed online monitoring devices	QAM		Ngethu	Gigiri	kikuyu	Kabete	One plant per year	-	17,000	16,000	8,000	12,000	53,000	53,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			Comply with Sampling and testing guidelines for Blue Water	Water quality Reports	QAM						continuous	10,000	10,000	10,000	10,000	10,000	50,000	50,000	
			Carry out annual internal and external proficiency testing	Proficiency testing reports	QAM	1	1	1	1	1	5	1,000	1,000	1,000	1,000	1,000	5,000	5,000	
			Acquisition of standardization mark of Quality and annual renewal	certificate of registration	ISO M						Annual	2,000	500	500	500	500	4,000	4,000	
<b>INTERNALLY FUNDED</b>												<b>367,100</b>	<b>385,745</b>	<b>630,646</b>	<b>309,067</b>	<b>297,769</b>	<b>1,990,327</b>	<b>1,990,327</b>	<b>141,815,750</b>
<b>EXTERNALLY FUNDED</b>												<b>155,000</b>	<b>4,704,500</b>	<b>22,132,500</b>	<b>104,823,750</b>	<b>10,000,000</b>	<b>141,815,750</b>		
<b>TOTAL THEME REQUIREMENTS</b>												<b>522,100</b>	<b>5,090,245</b>	<b>22,763,146</b>	<b>105,132,817</b>	<b>10,297,769</b>	<b>143,806,077</b>		
<b>WASTE WATER NETWORKS, CONVEYANCE AND TREATMENT</b>																			
To collect and convey 100% of waste water generated in Nairobi City to	Increase sewerage network coverage from 50% to 80%	Enhance waste water treatment plants and facilities	Land acquisition for wayleaves	Reduce legal cases and penalties from legal authorities	E&CM		Wayleaves acquired					-	80,000	-	-	-	80,000	80,000	
			Construct new sewer lines of various sizes	Km of sewer lines constructed	EM	120Km	127Km	135Km	143Km	152Km		2,500,000	2,667,000	2,835,000	3,003,000	3,192,000	14,197,000		14,197,000
			Demarcate & register the way-leaves	Uninhibited access for	TD								20,000	30,000	80,000	80,000	90,000	300,000	300,000

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
WWTPs			at the survey of Kenya	operation and maintenance of sewer network															
			Acquire land and construct new waste water treatment plants to meet the demand	Increased waste water treated	TD			External funding		Construct new plant		-	-	-	5,000,000	-	5,000,000		5,000,000
			Reconstruction of Kiu river trunk sewers to correct invert levels	Reconstructed trunk line to aid gravitational flow	TD			Construction				-	-	250,000	150,000	-	400,000		400,000
			Acquire a new incinerator for Ruai treatment works	Functional incinerator	O&M			Incinerator installed				-	20,000	60,000	-	-	80,000	80,000	
			Construction of perimeter fences/walls	Secured facilities	EM	Kariobangi, Kikuyu, Outering Rd Tower	Kasarani and Kiambu, Ruai Beacons	Kabete, & Gigiri	Karura, Loresho Tower	Embakasi Tank & Wilson Reservoir		28,000	20,000	10,000	10,000	20,000	88,000	88,000	
			Acquire land and develop 3 no. Waste water discharge points for exhausters	Easy access for exhausters to discharge points and increased revenue	TD		Land acquired		Discharge points constructed			-	30,000	70,000	-	-	100,000		100,000

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
		Upgrading and Rehabilitation of existing WWTPs and Facilities (O+M)	Maintenance of treatment plants, existing trunks and lateral sewers & man holes	improved sewerage coverage	E&CM	Continuous	Continuous	Continuous	Continuous	Continuous		30,000	40,000	50,000	60,000	70,000	<b>250,000</b>	250,000	
			Annual desilting of trunk and lateral sewers	Increased operational efficiency	E&CM	Continuous	Continuous	Continuous	Continuous	Continuous		10,000	10,000	10,000	10,000	10,000	<b>50,000</b>	50,000	
			Clearing encroached wayleaves	Uninhibited access for operation and maintenance of sewer network	SM	Continuous	Continuous	Continuous	Continuous	Continuous		5,000	5,000	3,000	2,000	2,000	<b>17,000</b>	17,000	
			Desludging of waste water treatment plants ponds	Efficient waste water treatment plants	E&CM		Contract		Contract			-	40,000	-	20,000	-	<b>60,000</b>	60,000	
			Rehabilitation and fencing of Karen and Kahawa west waste water stabilization ponds	Well maintained and secured stabilization ponds	E&CM		Contract					-	25,000	-	-	-	<b>25,000</b>	25,000	
			Measurement of inlet and outlet flows at Ruai and Kariobangi waste water	Quantified inlet and outlet flows	E&CM		Procure & install meters	Continuous	Continuous	Continuous			43,000	5,000	5,000	5,000	<b>58,000</b>	58,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			treatment plants																
			Rehabilitate and upgrade the existing waste water laboratories in Kariobangi and Ruai.	Quality monitoring of waste water	EM	Rehabilitate Ruai		Rehabilitate Kariobangi			35,000	-	30,000	-	-	65,000	65,000		
			Plan/re-align sewer infrastructure to be consistent with re-zoning of land use/CIDP	Developed framework for change adoption.	TD		Development of framework				-	5,000	2,000	2,000	2,000	11,000	11,000		
			Update the attributes of sewer infrastructure on GIS	Map/database of sewer attributes	EM		10%	50%	80%	100%	5,000	10,000	30,000	30,000	30,000	105,000	105,000		
	Expansion of sewer network by 30% by June 2024		Lobby for funding from partners, government and adoption of Private-public-Partnership for sanitation.	Amount of funds mobilised	MD	2,500,000,000	2,667,000,000	2,835,000,000	3,003,000,000	3,192,000,000	14,197,000,000	2,000	5,000	4,000	4,000	4,000	19,000	19,000	
			Initiate a sanitation revolving fund	Existing sewer revolving fund	MD	Development of framework	4% of sewer collection	4% of sewer collection	4% of sewer collection	4% of sewer collection	5,000	1,000	1,000	1,000	1,000	9,000	9,000		
			Improve community participation /partnership in secondary	Km of sewer lines constructed	EM	Awareness	2Km	2.5km	2.8Km	3Km	5,000	42,000	52,500	58,800	63,000	221,300	221,300		



Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			sewer constructions.																
	Decentralize sewer treatment areas by June 2024	Land acquisition	Land Titles	MD			Lobbying	Acquisition			-	-	5,000	-	-	5,000		5,000	
	To improve/ Enhance the hydraulic efficiency of the sewer network	Upgrading of over stretched sewer network continuously by June 2024	Re-designing & rehabilitation of existing sewer and implementation of simplified sewer system in Informal Settlements to match demand as per new developments	Sewer Coverage	EM	55%	60%	65%	70%	80%		3,000	25,000	400,000	900,000	1,200,000	2,528,000		2,528,000
															976,400	980,000	985,000	990,000	995,000
	Improve water and sanitation services in the Informal Settlements	Increase access of water and sanitation	Acquire land in the Informal Settlements	No. of parcels acquired	MD	20	20	20	20	20	100	20,000	20,000	20,000	20,000	20,000	100,000		100,000
			Construct water & sanitation facilities	No. of completed facilities	ISR-M	18	20	20	20	20	20	98	46,000	60,000	60,000	60,000	60,000	286,000	
Minimize disruption of waste	To ensure 100% compliance to	Trade Effluent Management & Decentral	Develop and implement of trade effluent Management	Operational TEMS	ECM	Baseline study	Implementation	Monitoring	Monitoring	Review		5,000	5,000	20,000	4,000	7,000	41,000	20,500	20,500



Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding		
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External	
water conveyance, sewer degradation and WWT processes	discharge standard into public sewers by 2023 and to enable reuse of faecal sludge	ize Sewer treatment	system (TEMS)																	
			Mapping of industries attributes and location on GIS platform	Database on Attributes per industry, location and monitoring points.	ECM	Feasibility study	20%	50%	70%	100%	Continuous	5,000	3,000	3,000	3,000	3,000	17,000	17,000		
			Quarterly Stakeholder engagement	Minutes/reports	ECM	4	4	4	4	4	20	20,000	20,000	20,000	20,000	20,000	100,000	100,000		
			Monitoring of industries: Monitoring the quality of effluent discharge from industries	Effluent industries Reports	QAM/ECM	30%	45%	60%	75%	100%	100%	3,000	10,000	2,000	1,000	7,000	23,000	23,000		
			Acquire mobile laboratory unit	Mobile unit acquired	Procurement		one						-	15,000	-	-	-	15,000	15,000	
				Level of compliance	QAM	100%	100%	100%	100%	100%	100%		-	-	-	-	-	-		
	Promote wastewater recycling by industries.	No of industries	ECM	20	20	20	20	20	100	100	100	100	100	100	500	500				
To Protect Public Health	Faecal sludge management.	Re-use of Faecal sludge to produce biogas, manure, briquettes	By-products produced.	R&M		Concept Paper	Approval of Concept Paper	Pilot	Pilot		-	4,000	4,000	4,000	4,000	16,000	16,000			
		Develop policy for decentralise d/off grid	Policy in place	TD	Lobbying	Development of policy					5,000	10,000	-	-	-	15,000	15,000			

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			treatment facilities sewer system to aid recycling of green water																
			Development of sanitation policy	Policy in place	ECM	Need analysis	Lobbying				5,000	2,000	-	-	-	7,000	7,000		
			Develop a policy paper for tracking exhausters	Policy in place	ECM	Develop					2,000	-	-	-	-	2,000	2,000		
			Technology for monitoring waste sources and disposal (Tracking exhauster)	All exhauster in Nairobi in the database	ECM	Pilot	20%	50%	80%	100%									
			Quantitative and qualitative Monitoring of effluent /faecal sludge at the discharge point (Exhausters)	Faecal/effluent sludge reports	QAM	30	50	70	85	100	Continuous	3,000	7,000	1,000	1,000	3,000	15,000	15,000	
			Use of appropriate technology to monitor faecal sludge	Appropriate Technology in place	QAM		Feasibility study	Implement	Implement	100%									
			Research/Technology on decentralise	Implemented decentralised system	RDM	Research	Validation	Implementation	Implementation	Implementation									
											5,000	5,000	15,000	15,000	15,000	55,000	27,500	27,500	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			Improved sanitation management																
	Improve On-site sanitation for non-sewered areas	Research and technology on waste management	Implemented decentralized system	RDM	Research	Validation	Implementation	Implementation	Implementation		5,000	5,000	15,000	15,000	15,000	55,000	27,500	27,500	
	Engage for policy/governance for onsite sewer management	Policy in place	ECM	Need analysis	Lobbying						5,000	2,000	-	-	-	7,000	7,000		
	Engage for Partnership especially for densely populated areas with land tenure challenges									Continuuous	5,000	5,000	5,000	5,000	5,000	25,000	12,500	12,500	
To ensure compliance to discharge standard into environment	Comply with Water quality regulation 2006 by June 2024	Environmental Management System Certification	Environmental Management Certification	ECM		Pre-Certification External Audit and Training	Pre-Certification External Audit and Training	Certification Audit			-	10,000	10,000	5,000	-	25,000	25,000		
	Lobby with the County Government to reclaim illegally acquired land e.g. Ruai, Kariobangi Kahawa and Karen.	Effluent quality reports	ECM		By 2022						-	5,000	-	-	-	5,000	5,000		
	Pilot the use of wetlands							By 2024			-	-	-	-	15,000	15,000	15,000		
	Construct wetlands	Acreeage	MD					60 acres in Ruai			-	-	100,000	-	-	100,000	100,000		

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding						
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External					
			Rehabilitation and automation of the inlet works.	Automated inlet	TD		By 2021																	
			De-sludging ponds	Pond depth	TD		Ponds 1-8	Pond 9-16	Ponds 17-24															
			Seek accreditation of the water and wastewater laboratory	ISO 17025:2017 Accredited Lab	ISO-M		By 2020																	
			Rehabilitate/equip the wastewater laboratory	Operation Laboratory	QAM		By2021																	
			Procure laboratory information management system	Laboratory Information Management in place	Procurement							10,000	-	-	-	-								
				Operational LIMS	QAM				By 2023				-	-	-	2,000	-							
			Procure mobile laboratory	Mobile Lab	QAM		1 unit																	
<b>INTERNALLY FUNDED</b>																								
<b>EXTERNALLY FUNDED</b>																								
<b>TOTAL THEME REQUIREMENTS</b>																								
<b>NON-REVENUE WATER</b>																								
Reduce NRW	Reduction of combined	Reduction of Commercial losses	Replace stopped meters, faulty,	No. of meters replaced	RMs	20,000	20,000	20,000	20,000	20,000	100,000	60,000	60,000	60,000	60,000	60,000	300,000	300,000						

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year					Budget by Plan Year KES ('000)					Funding			
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
NRW from 36% to 25%			damaged, aged, stolen meters																
			Install Meter Installation seals	No of sealed Meters	RMs	15,750	35,438	35,438	35,438	35,438	157,500	158	354	354	354	354	1,575	1,575	
			Measure system input (i.e. Raw Water, Transmission & Distribution Network)	Metered flows	NRW M		40	40	40	40	160	-	122,000	122,000	122,000	-	366,000		366,000
			Measure the flows into the DMAs	Accurate measurement of DMAs (Volumes)	NRW M	55	55	55	55	55	275	36,550	36,550	36,550	36,550	-	146,200	73,100	73,100
			Construction of Chambers for ALL bulk meters	No of Chambers constructed	EM	20	20	40	50	80	210	4,000	4,000	8,000	10,000	16,000	42,000	42,000	
			Carryout a Customer Identification Survey (CIS), mapping meter points and Data Clean up	No. of authenticated accounts	NRW M	60,000	60,000	60,000	60,000	60,000	300,000	10,000	10,000	10,000	10,000	10,000	50,000	50,000	
			Identify and meter all fire hydrants in the distribution systems	No. of fire hydrants metered	O&M M	100	100	-	-	-	200	2,500	2,500	-	-	-	5,000	5,000	
			Regularization of illegal water & sewer connections	No. of illegal points regularized	RMs	10,500	10,500	10,500	10,500	10,500	52,500	27,500	27,500	27,500	27,500	27,500	137,500	137,500	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding		
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External	
			Procure Automated Digital Meter Testing Bench	Acquisition and installation of 1 No Bench	NRWM	1						1	10,000	-	-	-	-	10,000	10,000	
			Expansion of Meter Testing Sheds for the Test Bench	Operational Shed	EM			Expansion					-	-	10,000	-	-	10,000	10,000	
			Procure Portable Testing Kits	No of Kits procured	NRWM		3					3	-	3,000	-	-	-	3,000	3,000	
			Install AMR ultrasonic meters on HC's (Customers consuming 200units and above)	1,000 No. of AMRs installed	eWater PM	200	200	200	200	200	1,000	23,250	23,250	23,250	-	-	-	69,750	69,750	
			Install Automated Meters with Narrow Band (NB) Internet of Things (IoT) and like technology	5,000 No. of Automated Meters installed	eWater PM		1,000	1,000	1,500	1,500	5,000	-	13,000	-	13,000	-	-	26,000	26,000	
			Construction and rehabilitation of meter Chambers in Informal Settlements	No. of chambers constructed	ISRM	12	12	12	12	12	60	1,800	1,800	1,800	1,800	1,800	9,000	9,000		
				No. of chambers rehabilitated	ISRM	12	12	12	12	12	60	600	600	600	600	600	3,000	3,000		
			Installation of PPDs in informal areas	No. of PPDs installed	ISRM	136	136	136	136	136	680	27,200	27,200	27,200	27,200	27,200	136,000	136,000		

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			Implementation of modern and more responsive billing system	Implementation level	ICTD	40%	70%	100%	-	-		100,000	50,000	-	-	-	150,000	150,000	
	Reduction of technical losses		Timely resolution and repair of leaks and bursts within the transmission and distribution lines	No. of hours taken to repair	RMs	48hours	48hours	48hours	48hours	48hours	48hours	30,000	30,000	30,000	30,000	30,000	150,000	150,000	
			Procurement of leak detection Van	Acquisition of 1 No Van	NRWM		1					-	30,000	-	-	-	30,000	30,000	
			Relocation of main distribution lines from underground to above surface in identified areas like Informal Settlements	No. of kilometres	O&MM	3	3	3	3	3	15	30,000	30,000	30,000	30,000	30,000	150,000	150,000	
			Installation of small aperture air valves at customer meter points	No. of air valves	RMs	14,000	14,000	14,000	14,000	14,000	70,000.00	21,000	21,000	21,000	21,000	21,000	105,000	105,000	
			Installation of isolation valve to the	Isolation valve installed	O&MM	Kabete pump house						1,500	-	-	-	-	1,500	1,500	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			pump house at Kabete																
			Install bulk flow meters	No. of bulk flow meters installed	NRW M	3	20	20	20	20	83	8,000	50,000	50,000	50,000	50,000	208,000	208,000	
			Bulk meter chambers		O&M M												-		
			Procurement and installation of 250 pressure loggers	No. of loggers installed	E-Water PM			Contract	Contract			-	-	60,000	90,000	-	150,000	150,000	
			Replacement of old pipes in zone 8; CBD/ Industrial Area- 34.3km, Pumwani/starehe-54.5km, south zone 8 (Jogoo, Embakasi and Viwandani)- 46.7km, totaling to 135.5 Km	Length in KM of pipes replaced	EM		Contract	Contract	Contract	Contract		-	100,000	200,000	250,000	250,000	800,000	800,000	
			Procure assortment of leak detection Equipment	No of leak detection equipment procured	NRW M							10,000	-	-	-	-	10,000	10,000	
		Procure NRW Management System	Acquire NRW Management System	NRW Management System in Place	NRW M		1					-	20,000	-	-	-	20,000	20,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding		
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External	
<b>INTERNALLY FUNDED</b>											385,783	422,479	718,254	780,004	274,454	1,850,425	1,850,425	1,239,100		
<b>EXTERNALLY FUNDED</b>											18,275	240,275			250,000	1,239,100				
<b>TOTAL THEME REQUIREMENTS</b>											404,058	662,754	718,254	780,004	524,454	3,089,525				
<b>CUSTOMER FOCUS &amp; STAKEHOLDER ENGAGEMENT</b>																				
Enhance Stakeholder Engagement	To guarantee efficient service delivery	Hold Public participation forums	Hold workshops with CBOs, WRA, WASREB	Report	CD	1	1	1	1	1	5	5,000	5,000	5,000	5,000	5,000	25,000	25,000		
			Hold ASF (Annual Stakeholders Forum)	Resolutions/Minutes	CAM	1	1	1	1	1	5	5,000	5,000	5,000	5,000	5,000	25,000	25,000		
		Develop a communication strategy	Conduct Media campaigns, engagement and publications & social platforms	Consultant	CAM	1					1	2	4,000				4,000	8,000	8,000	
			No. of media campaigns	CAM	4	4	4	4	4	4	20	20,000	20,000	20,000	20,000	20,000	100,000	100,000		
			No. of publication of newsletters	CAM	12	12	12	12	12	12	60	250	250	250	250	250	1,250	1,250		
	Enhance stakeholders' relations and engagements	Compliance to set regulatory standards	Prompt payment of levies and fees	Timely payment	FME	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous	-	-	-	-	-	-	-	
		Partnership with County Government and other governm	Conduct regular mass disconnection & arrests	4 Number of major operations conducted in every region annually.	RMs	28	28	28	28	28	140	14,000	14,000	14,000	14,000	14,000	70,000	70,000		

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
		ent agencies on disconnection of illegal connections																	
		Identification and Engagement with Research Institutions	Publication of research papers	No. of published papers	R&DM	2	2	2	2	2	10	2,000	2,000	2,000	2,000	2,000	10,000	10,000	
		Engage with county and national governments	Collaboration and holding meetings	No. of meetings	MD	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous	-	-	-	-	-	-	-	
		Participation in local and international forums	Participation in local and international forums	No. of Forums	MD	As per need basis						20,000	20,000	20,000	20,000	20,000	100,000	100,000	
To strengthen the corporate brand	Engage in Corporate Social Responsibility	Adopt & Implement CSR Policy	No. of CSR activities	CAM	Continuous	Continuous	Continuous	Continuous	Continuous			-	25,000	25,000	25,000	25,000	100,000	100,000	
	Brand development	Brand Manual	Consultant	CAM	1				1	2		4,000			4,000	8,000	8,000		
		Branding exercise	Branded fleet, facilities, stationary, uniform	CAM	Continuous	Continuous						-	92,000	100,000	-	-	192,000	192,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
	To strengthen the corporate brand	Engage in Corporate Social Responsibility	Corporate support to the underprivileged	No. of support activities	CAM		Continuous	Continuous	Continuous	Continuous		-	10,000	10,000	10,000	10,000	<b>40,000</b>	40,000	
		Brand development	Develop a brand manual	Brand Manual	CAM			Continuous	Continuous				20,000				<b>20,000</b>	20,000	
		Branding activities	New corporate brand	CAM				Continuous	Continuous				-	80,000	100,000	150,000	20,000	<b>350,000</b>	350,000
	Improve working relations with NCCG	Having a performance contract in place with NCCG	Signing the performance Contract	Signed PC	MD	1	1	1	1	1	5	100	100	100	100	100	<b>500</b>	500	
Enhancing Service Delivery	To increase customer satisfaction by 5% annually from the current 73%	To resolve customer complaints	Revise the customer service charter after every 2 years	Revised Customer Service Charter	CRM		1		1		2	-	3,000	-	3,000	-	<b>6,000</b>	6,000	
			Upgrading of the customer complaints handling system	Upgraded system with new features	CRM	100%		100%		100%	<b>100%</b>	3,000		3,000		3,000	<b>9,000</b>	9,000	
		Carry out an external customer satisfaction survey	Customer satisfaction survey report	CRM	1	1	1	1	1	5	6,000		8,000		8,000	<b>22,000</b>	22,000		
	Equitable water distribution	Adherence to water distribution schedule	Report on distribution schedule	O&M M	100%	100%	100%	100%	100%	<b>100%</b>	-	-	-	-	-	-	-	-	-
		Continuous review of the water distribution schedule	Equitable water distribution schedule reviewed	O&M M	2	2	2	2	2	<b>10</b>	-	-	-	-	-	-	-	-	-

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			Communication of the distribution schedule to the customers	Published communication schedule	CAM	2	2	2	2	2	10	5,000	5,000	5,000	5,000	5,000	25,000	25,000	
	Customer outreach		Carry out customer care workshops, clinics and road shows	No of clinics undertaken	RMs	100	100	100	100	100	500	20,000	20,000	20,000	20,000	20,000	100,000	100,000	
<b>INTERNALLY FUNDED</b>												<b>104,350</b>	<b>325,350</b>	<b>337,350</b>	<b>279,350</b>	<b>165,350</b>	<b>1,211,750</b>	<b>1,211,750</b>	<b>-</b>
<b>EXTERNALLY FUNDED</b>																			
<b>TOTAL THEME REQUIREMENTS</b>												<b>104,350</b>	<b>325,350</b>	<b>337,350</b>	<b>279,350</b>	<b>165,350</b>	<b>1,211,750</b>		
<b>GOVERNANCE AND CAPACITY DEVELOPMENT</b>																			
Enhance Corporate Governance and Compliance	Ensure compliance to statutory and regulatory requirements	Partnerships and collaborations	Partnerships: Regulatory Authorities, Communities, County and National Government, Development Partners, Sector and Government Agencies	No of partners working with the Organisation	MD	Stakeholders analysis	Lobbying	Lobbying	Lobbying	Lobbying		-	5,000	5,000	5,000	5,000	20,000	20,000	
		Effective legislation that guide the sector reporting lines: Institutional arrangement	Lobby for legislation of institutional structure. E.g. alignment of water act and legislations	Reviewed Legislation	MD	Reviews as per dynamics		-	3,000	2,000	2,000	1,000	8,000	8,000					

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
		ent and governance structure:																	
Develop policy guidelines for Company	Departmental strategies and procedures in line with corporate guidelines.	Develop corporate policies and procedures in line with corporate guidelines.	Approved strategies, policies and procedure in the department	MD	Reviews/Develop	Implementation						30,000	8,000	-	-	-	38,000	38,000	
		Implementation of ISO 9001:2015 - Quality Management System	QMS Certification	MD	Implementation	Audit and Review	Audit and Review	Audit and Review	Audit and Review				10,000	5,000	5,000	5,000	5,000	30,000	30,000
Business Continuity and governance structures	Corporate governance structure	Review the board charter	Reviewed Board Charter	CS	Review	Implementation						10,000	-	-	-	-	10,000	10,000	
		Formulate Governance management business policy	Approved Governance management business policy	MD	Review	Implementation							8,000	10,000	-	-	-	18,000	18,000
	Reclaim and Secure all water and sewerage assets	Up to date Register of water and sewerage assets and utilities	MD	up to date register	up to date register	up to date register	up to date register	up to date register				10,000	10,000	10,000	10,000	10,000	50,000	50,000	
	Disaster Management	Develop Business continuity plan	Disaster Recovery Plan	Disaster Recovery Plan	MD	Review	Implementation						10,000	10,000	-	-	-	20,000	20,000
Disaster Preparedness and Recovery			Disaster Preparedness and Recovery	MD	Review	Implementation							5,000	5,000	-	-	-	10,000	10,000

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding			
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External		
			Implementation of Information security Management System ISO 27000: 2018	Certification	ICTD	Training	Acquisition and Implementation	Implementation and Review	Implementation and Review	Implementation and Review		-	10,000	5,000	5,000	5,000	<b>25,000</b>	25,000			
Enhance Governance Risk and Control Processes	Appropriate risk management process, system and culture embedded within the organization		Automation of governance, risk and compliance software	Working ERM system	MD	Review	Acquisition and Implementation	Implementation	Implementation	Implementation		5,000	10,000	2,000	2,000	2,000	<b>21,000</b>	21,000			
			Review and align the risk framework to the current Strategic Plan and ISO 3100:2018	Approved Risk Framework	CoRM	Review	Implementation	Implementation	Implementation	Implementation		10,000	1,000	1,000	1,000	1,000	<b>14,000</b>	14,000			
			Include risk and implication of key decision as standing agenda of the board	Register of the risks for all major decisions	MD								-	-	-	-	-	-	-	-	
			Develop a compliance risk monitoring policy and frameworks	Approved Compliance and risk Monitoring Policy and Frameworks	CS		Review	Implementation	Implementation	Implementation	Implementation		-	10,000	1,000	1,000	1,000	<b>13,000</b>	13,000		
			Continuous Monitoring of Company processes	Acquisition of Continuous Monitoring and Auditing system	Working Real time monitoring system	IARSD	Review	Acquisition and Implementation	Implementation	Implementation	Implementation		5,000	20,000	1,000	1,000	1,000	<b>28,000</b>	28,000		

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding			
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External		
Enhance Work Environment	To have affordable & convenient office space	Ensure an accessible & good working environment	Acquisition of new offices	Reduced operational costs	ALM				Acquisition of new offices			-	-	-	-	500,000	<b>500,000</b>	500,000.0			
			Construct Sanitary facilities for staff	No. of Sanitary facilities	EM	Kampala Road & Kabete	Eastleigh & Kariobangi	Southern Region & Karen	Sasumua & Ruai	Other Stations			7,500	7,500	7,500	7,500	7,500	<b>37,500</b>	37,500.0		
			Construct Convenience rooms for lactating mothers	Number of lactating rooms	EM	Head Office	Southern Region	North Eastern Region	Ngethu	Ruai				5,000	5,000	5,000	5,000	5,000	<b>25,000</b>	25,000.0	
			Construction of Modern offices at Kampala rd.	Modern Office complex	MD					Operational head office				-	-	100,000	250,000	250,000	<b>600,000</b>	600,000.0	
			Construction of Business Complex at Water stores to accommodate Central Region, and CBD Business Centre	Business Complex	MD		Operational business complex							-	-	200,000	500,000	500,000	<b>1,200,000</b>	1,200,000.0	
			Construction and maintenance of minor facilities and infrastructure	Enhanced work environment	EM	Regular maintenance of facilities			120,910	126,956	133,303	139,968	146,967	<b>668,104</b>	668,104.1						
Enhanced Organizational Performance	Responsive organization structure	Job evaluation	Review the organization structure	Approved Organization Structure	DHRA	Approved structure						15,000	-	-	-	-	<b>15,000</b>	15,000			
	Enhanced	Enhancement of	Carry out a skills audit	Skills report	DHRA		Skills audit report					-	5,000	-	-	-	<b>5,000</b>	5,000			

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
	Staff productivity	staff skills and competencies	Training of staff	No. of staff trained	HRM	3000	3000	3000	3000	3000		100,000	140,000	140,000	120,000	100,000	600,000	600,000	
			Conduct Employee satisfaction survey	Survey Report	RDM		1		1		2	-	4,000	-	4,000	-		8,000	8,000
	Staff Optimization	Enhance Staff	No. of staff/1000 water and sewer connections	DHRA	7	7	6	6	5		10,000	20,000	30,000	40,000	50,000	150,000	150,000		
	Provision of conducive and safe work environment	Audit of work environment	Audit report	ALM		Audit report	Implementation	Implementation	Implementation		-	30,000			30,000		60,000	60,000	
		Performance Management	Performance Reforms and Cascading	% Performance achieved against Set targets	HRM	100%	100%	100%	100%	100%		-	-	-	-	-	-	-	-
Change management	Business continuity	Staff motivation	Staff rewards & recognition	No. of staff rewarded/recognized	HRM	No. rewarded/recognized	No. rewarded/recognized	No. rewarded/recognized	No. rewarded/recognized	No. rewarded/recognized		5,000	5,000	5,000	5,000	5,000	25,000	25,000	
			Ensure certification of technical staff i.e. treatment operators and artisans	No. of staff Certified	HRM	No. certified	No. certified	No. certified	No. certified	No. certified		5,000	5,000	5,000	5,000	5,000	25,000	25,000	
	Staff innovation & creativity	Encourage creativity and innovation	No. of innovation	RDM	Prototypes and Innovation		10,000	10,000	10,000	10,000	10,000	50,000	50,000						
		Knowledge management	Approved policy	DHRA		Approved policy	Implementation	Implementation	Implementation		-	3,000	500	500	500		4,500	4,500	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
		Succession planning	Mentorship and coaching	Mentorship programs in place	DHRA		Developed programs, approved policy	Implementation	Implementation	Implementation		-	3,000	300	300	300	3,900	3,900	
	Culture change	Culture change program	Carry out culture change training program including identification of change agents	staff trained	HRM	No. of staff trained	No. of staff trained	No. of staff trained	No. of staff trained	No. of staff trained		50,000	35,000	20,000	20,000	20,000	145,000	145,000	
			Team buildings	No. of team building done	DHRA	team building	team building	team building	team building	team building		30,000	40,000	60,000	60,000	60,000	250,000	250,000	
			Benchmarking/Peer to peer learning	No. of exchange programs	DHRA	benchmark s/exchange programs	benchmark s/exchange programs	benchmark s/exchange programs	benchmark s/exchange programs	benchmark s/exchange programs		20,000	20,000	20,000	20,000	20,000	100,000	100,000	
<b>INTERNALLY FUNDED</b>												<b>471,410</b>	<b>556,456</b>	<b>758,603</b>	<b>1,209,268</b>	<b>1,731,267</b>	<b>4,777,004</b>	<b>4,777,004</b>	<b>-</b>
<b>EXTERNALLY FUNDED</b>												<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>TOTAL THEME REQUIREMENTS</b>												<b>471,410</b>	<b>556,456</b>	<b>758,603</b>	<b>1,209,268</b>	<b>1,731,267</b>	<b>4,777,004</b>	<b>-</b>	
<b>WATER SOURCES, TREATMENT, TRANSMISSION AND DISTRIBUTION</b>																			
Automation of Company processes to enhance efficiencies and	To improve existing Oracle ERP e-business suite and database system	Have an updated & efficient ICT systems and related software	Implementation of supply chain and budgeting module in e-business suite	Integrated supply chain module in e-business suite	BAM		Implementation of procurement module	Implementation of procurement module				-	70,000	80,000	-	-	150,000	150,000	
			Implementation of oracle e-business human	Integrated human capital module in	BAM		Implementation of human capital module	Implementation of human capital module				-	30,000	20,000	-	50,000	50,000		

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding			
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External		
effectiveness			capital module	e-business suite																	
			Implement Capacity, Operations, Management & Maintenance Information System (COMMIS)	Operational COMMIS	ICTD		Implementation of COMMIS					20,000					20,000	20,000			
				Integrated project management in e-business suite	ICTD		Implementation of project management module					-	20,000	-	-	-	20,000	20,000			
To enhance business efficiency through use of technology	Have a current & efficient ICT infrastructure & related software	Implementation of asset management system for water and waste water utilities	Integrated asset management system for water and waste water utilities in e-business suite	ICTD		Implementation of asset management system for water and waste water	Implementation of asset management system for water and waste water	Implementation of asset management system for water and waste water			-	-	30,000	20,000	30,000	80,000	80,000				
						Establish a GIS Centre with full integration of business systems	An integrated GIS enabled control room	ICTD	Establish a GIS enabled control centre					-	10,000	20,000	-	-	30,000	30,000	
						GIS Mapping of all water and sewer networks, connections, vendors, meters	% of area covered	EM	33%	43%	53%	73%	100%		10,000	10,000	10,000	12,000	15,000	57,000	57,000

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			Implementation of basis 2 customer management system	Integrated basis 2 customer management system	BAM		Implementation of basis2 CMS					50,000	-	-	-	-	50,000	50,000	
			Implement an audit vault and data guard	Integrated audit vault and data guard	ICTD							20,000	-	-	-	-	20,000	20,000	
			Oracle database system upgrade	Upgraded oracle database	DBM	Upgrade of Oracle dB						40,000	-	-	-	-	40,000	40,000	
			Develop executive dashboard management for all existing systems	Readily available executive dashboard for data analysis	BAM		Implementation of the executive dash board					-	3,000	1,000	1,000	-	5,000	5,000	
			Procure and deploy enterprise risk management system for managing Company enterprise risk	Integrated enterprise risk management system	RM		Implementation of enterprise risk management system	Implementation of enterprise risk management system				5,000	2,000	2,000	2,000	2,000	13,000	13,000	
			Acquire audit and continuous monitoring system	integrated audit and continuous monitoring system	IAM		Implementation of audit and continuous monitoring system	Implementation of audit and continuous monitoring system				-	5,000	5,000	-	-	10,000	10,000	
			Workforce Management system	Integrated workforce management system	ICTD							20,000	-	-	-	-	20,000	20,000	
			Deployment of one stop	integrated mobile app	BAM	Implementation of	Implementation of	Implementation of				1,000	2,000	3,000	-	-	6,000	6,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			solution for interactions (USSD) and mobile app for customers services	for customer service		mobile app for customer service	mobile app for customer service	mobile app for customer service											
			Development and implementation of e-bill system	integrated e-bill system	BAM	Implementation of e-bill system						2,000	-	-	-	-	2,000	2,000	
			Deploy an interactive Company website	Revamped NCWSC's website	BAM	Revamped website		Revamped website				3,000	-	3,000	-	-	6,000	6,000	
			Roll out real time agency banking platform to manage agencies collection	Availability of real time agency banking system	DBM	Availability of real time agency banking system	Availability of real time agency banking system					2,000	2,000	-	-	-	4,000	4,000	
			Deployment of LIMS (Lab information management systems)	Availability of LIMS	QAM	Availability of LIMS	Availability of LIMS					4,000	4,000	-	-	-	8,000	8,000	
			Deployment of SMS gateway system	Availability reliable SMS gateway	BAM	Availability reliable SMS gateway						3,000	-	-	-	-	3,000	3,000	
			Deploy an Integrated Board Management Solution (IBS)	Availability of an Integrated Board Management Solution (IBS)	ICTD	Availability of an Integrated Board Management Solution (IBS)						2,000	-	-	-	-	2,000	2,000	
			Acquire an electronic Data	EDMS System in Place	ICTD	Acquire and	Implement EDMS	Implement EDMS	Implement EDMS	Implement EDMS		15,000	30,000	20,000			65,000	65,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
			Management System (EDMS)			operationalize EDMS													
			Data warehouse and business intelligence	Stored data and business continuity	DBM	Stored data and business continuity	Stored data and business continuity	Stored data and business continuity	Stored data and business continuity			2,000	2,000	2,000	2,000	-	8,000	8,000	
	To develop and/or acquire quality online monitoring systems to effectively support business growth	Have a current & efficient ICT infrastructure & related software	Training of staff on emerging technologies and newly commissioned software	Trained staff	DHRM	Trained staff	Trained staff	Trained staff	Trained staff			-	-	-	-	-	-	-	
Procurement of online water quality monitoring sensors			Water quality sensors are in place	EWM		Procurement of water quality sensors	Installation of water quality sensors					-	5,000	5,000	-	-	10,000	10,000	
Deployment of SCADA in water and sewerage infrastructure (supervisory control and data acquisition system)			Deployed Scada system	ICTD	Design, acquire, pilot	water treatment plants	water transmission lines	water reservoir tanks	Sewer treatment plants and trunk sewer lines			5,000	10,000	20,000	15,000	25,000	75,000	75,000	
Automate the inlet works			Automated functional inlet works	E&CM	Design & acquire	Installation						-	18,000	25,000	-	-	43,000	43,000	
To enhance, upgrade, improve and ensure reliability	Have a current & efficient ICT infrastructure & related software	Implementation of ICT converged infrastructure and virtual desktop environment	Available ICT infrastructure and virtual desktop.	NIM		Available ICT infrastructure and virtual desktop.	Available ICT infrastructure and virtual desktop.				-	30,000	10,000	-	-	40,000	40,000		

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
	ty, efficiency of the Company infrastructure																		
	To ensure availability of business systems, ICT infrastructure, database systems and business operations	Have a current & efficient ICT infrastructure & related software	Maintain / upgrade the peripheral data center / secondary data center and requisite peripherals	Efficient and available data center	NIM	Available data center	Available data center	Available data center	Available data center			10,000	10,000	10,000	10,000	-	40,000	40,000	
Procurement of 500 desktop computers, 200 laptop computers, 600 No mobile devices			Efficient and reliable working tools	NIM	Available and reliable computers and laptops			20,000	20,000	50,000	60,000	-	150,000	150,000					
Implement the state-of-the-art next generation firewall system and monitoring tools			Availability of firewall	NIM	Effective firewall		Effective firewall				30,000	-	20,000	-	-	50,000	50,000		
Ensure compliant licenses of all Company learning software			Availability and management of ICT infrastructure and system access within NCWSC's	ICTD	Available and updated software			40,000	40,000	40,000	40,000	-	160,000	160,000					

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding		
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External	
			Procure and deploy Engineering design aided software (ArcGIS, AutoCAD etc.)	Availability of Engineering design aided software (ArcGIS, AutoCAD etc.)	ICTD	ArcGIS, AutoCAD							18,000	3,000	3,000	3,000	3,000	30,000	30,000	
Plant, equipment & motor vehicle	Adequate & appropriate plant and equipment	Well maintained & efficient plant, equipment & motor vehicle	Acquire 1NO 16,000 litres, 3 No 8,000 litres capacity water tankers, 2 No mobile workshops,2 No excavators,1 No flushing unit,3 No canters,1No Exauster,30 double cabs,20 single cabs,50 No motorcycles,3 No four-wheel drive SUVs,	Increased operational efficiency	TM	3 Canters, 8 double cabs, 8 single cabs, 100 motorcycles and 1 SUV	1 exhauster, 4 double cabs, 1 SUV,	3 Canters, 8 double cabs, 8 single cabs, 100 motorcycles and 1 SUV	1 exhauster, 4 double cabs, flashing unit	3 Canters, 8 double cabs, 8 single cabs, 100 motorcycles		100,000	50,000	140,000	60,000	160,000	510,000	127,500	382,500.0	
		Adequate operational and stand by pumps for operation	Well maintained & efficient plant, equipment & motor vehicle	Full operational of a fleet management system	Efficient Company operations	TM	Procure and install	Operate	Operate	Operate	Operate		75,000	5,000	5,000	5,000	5,000	95,000	95,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
	on of water & waste water																		
	Produce hydro-power - Replace old and obsolete Hydro turbines at Sasumua.	Use available resources and infrastructure to produce hydro-power for use at Sasumua & export excess to grid (KPLC)	Draft specifications/TOR, Preparation of Contract for supply & installation of hydro-turbine, advertise and seek external funding.	Contract for the works for 100 Kw turbines capacity.	TD	Prepare specifications, contract.	Source for funding, Tender the works & commence implementation	Implementation, Test & commission	Generate 100Kw	Generate 100Kw		-	5,000	-	40,000	-	45,000	45,000	
Other ICT Infrastructure	Ensure up-to-date support ICT infrastructure	Updating support ICT infrastructure	Regular upgrade and maintenance	up-to-date support ICT infrastructure	ICTD	Regular update & Maintenance	Regular update & Maintenance	Regular update & Maintenance	Regular update & Maintenance	Regular update & Maintenance		84,900	89,145	93,602	98,282	103,196	469,126	469,126	
<b>INTERNALLY FUNDED</b>												<b>481,900</b>	<b>405,145</b>	<b>515,602</b>	<b>340,282</b>	<b>215,196</b>	<b>1,958,126</b>	<b>1,958,126</b>	<b>382,500</b>
<b>EXTERNALLY FUNDED</b>												80,000	40,000	112,000	48,000	128,000	408,000		
<b>TOTAL THEME REQUIREMENTS</b>												<b>561,900</b>	<b>445,145</b>	<b>627,602</b>	<b>388,282</b>	<b>343,196</b>	<b>2,366,126</b>		
<b>FINANCIAL STEWARDSHIP</b>																			
Revenue generation	To increase customer base by 25%	Increasing metering coverage	Prompt metering of new customers	No of new customers	RMs	5%	5%	5%	5%	5%		30,000	35,000	40,000	45,000	50,000	200,000	200,000	

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
	To increase water & sewer revenue by 30%	To increase sewer coverage	Regularize illegal water and sewer connections.	Revenue generated	RMs	50000	150000	150000	150000	150000	650,000	-	-	-	-	-	-	-	
	Alternative sources of revenue	Diversification	Consultancy services	Amount generated from consultancy	PMEM	Concept Paper	Approval of Concept Paper	5000	7000	10000	22,000	-	2,000	2,000	2,000	2,000	8,000	8,000	
			Water Academy	Amount generated from the academy	DPM	Develop Framework	Develop Curriculum	Engage Partners	5000	5000	10,000	1,000	1,000	1,500	2,000	2,000	7,500	7,500	
	Service delivery sustainability	To ensure pricing covers O+M costs	Carry out tariff review/indexation	Revised and gazetted tariff	CD	Tariff proposal Stake holder engagement	Approval and Roll out						2,000	10,000	-	-	-	12,000	12,000
Debt Management	To reduce debt by 50%	Increase collection efficiency	Debt Management Policy review	Reviewed policy	FD	Review			Review			1,000	-	-	1,000	-	2,000	2,000	
			Lobby with the NCCG for water clearance and CRB listing	Clearance Certificates Issued	MD	1000	1000	1000	1000	1000	5000	-	-	-	-	-	-	-	-
			Engagement of revenue collection agencies (Effective/Reliable)	Outstanding debt collected	RMs	150000	210000	220,500	231,525	243,101	1,055,126	-	-	-	-	-	-	-	-
				No of collection agencies	FM-R	NO of collection agency	NO of collection agency	NO of collection agency	NO of collection agency	NO of collection agency	NO of collection agency		5,000	6,000	7,000,000,	8,000	9,000	28,000	28,000
		Agency performance reports/Amount collected	% of collection	% of collection	% of collection	% of collection	% of collection	% of collection		-	-	-	-	-	-	-	-		

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
				% reduction of customer payment related complaints		% of complaints		-	-	-	-	-	-	-					
		Debt authentication	Pro-active debt clean up.	reduced debt	RMs	% of debt reduced	% of debt reduced	% of debt reduced				200	250	300	-	-	750	750	
External resource mobilization	To attract funding	To attract Development Partners and donors	Project proposals	Amount of attracted fund	DPM	800,000	800,000	800,000	800,000	800,000	4,000,000	3,000	3,000	3,000	3,000	3,000	15,000	15,000	
			Identification of Development Partners	No of partners engaged	DPM	5 MOUs	5 MOUs	25 MOUs	2,000	2,000	2,000	2,000	2,000	10,000	10,000				
Financial sustainability	To ensure compliance with statutory tax regulations	Lobby for zero-rating of water and sewerage services	Prepare proposal for zero rating of inputs (water is an essential commodity and basic human right)	Letter of exemption	MD	Exemption letters		1,000	1,000	1,000	1,000	1,000	5,000	5,000					
Water Levies by other regulatory lobby for capitaton	Compliance with payment regulations	Capping of payment levies	Ensure the levies are not increased arbitrary	Lobbying for capping		capping of the levy		-	-	-	-	-	-	-					
Water Resource Authority (WRA)	Compliance with payment	Reduction of levy (from 50 cents to 25 cents)	Reduction of levy by 50%	Lobbying for levy reduction		Levy reduced		-	-	-	-	-	-	-					

Goal	Objectives	Strategies	Activities	OVI	Main Actor	Target by Plan Year						Budget by Plan Year KES ('000)						Funding	
						2019/20	2020/21	2021/22	2022/23	2023/24	Total	2019/20	2020/21	2021/22	2022/23	2023/24	Total	Internal	External
levy (50cts per m <sup>3</sup> )	regulations																		
<b>INTERNALLY FUNDED</b>																			
<b>EXTERNALLY FUNDED</b>																			
<b>TOTAL THEME REQUIREMENTS</b>																			
						45,200	60,250	49,800	64,000	69,000	288,250	288,250	-						
						45,200	60,250	49,800	64,000	69,000	288,250								



### ANNEX 4: Methodology for Quality Service KPIs

KPI Cluster	Indicator	Indicator Elements	Computation
Quality of Service	Water coverage	Population served through individual connections-A	Total No. of active connections * Average household size The average household size is derived from the census data and is unique for each area The allowed per capita consumption is 20l/c/day and 10l/c/day for domestic and communal water points respectively
		Population served through yard taps -B	Total No. of active yard taps * Average No. of households served by a yard tap * Average household size The allowed range of the average number of households per yard tap is 4-10
		Population served through small MDUs-C	Total No. of active small MDUs * Average No. of households per small MDU * Average household size The allowed range of the average number of households per small MDU is 4-10
		Population served through medium MDUs-D	Total No. of active medium MDUs * Average No. of households per medium MDU * Average household size The allowed range of the average number of households per medium MDU is 11-20
		Population served through large MDUs-E	Total No. of active large MDUs * Average No. of households per large MDU * Average household size Allowed average number of households per large MDU is >21
		Population served through Kiosks -F	Total No. taps (depends on kiosk type) * Average No. of people served per tap The allowed range for kiosks is 100-400 people Sublocation population is derived from Census data and growth rates applied appropriately
		Number of people served with water services	A+B+C+D+E+F
		Population in Service area	Sum population of all sublocations within the WSP service area
		Water Coverage	Number of people served with water services/ Population in the Service area
	Drinking-Water Quality	Compliance with planned no. of residual chlorine tests	$\sum$ total no. of residual chlorine tests conducted of all the schemes within the WSP service area / $\sum$ total no. of residual chlorine tests planned of all the schemes within the WSP service area * 100
		Compliance with residual standards Chlorine	$\sum$ total no. of residual Chlorine tests within the norm for all the schemes within the WSP service area / $\sum$ total no. of residual Chlorine tests conducted for all the schemes within the WSP * 100
		Drinking-Water quality, Residual Chlorine	0.6 * Compliance with planned no. of residual chlorine tests + 0.4 * Compliance with residual Chlorine standards





KPI Cluster	Indicator	Indicator Elements	Computation
		Compliance with planned no. of bacteriological tests	$\sum$ total no. of bacteriological tests conducted of all the schemes within the WSP service area / $\sum$ total no. of bacteriological tests planned of all the schemes within the WSP * 100
		Compliance with bacteriological standards	$\sum$ total no. of bacteriological tests within norm for all the schemes within the WSP service area / $\sum$ total no. of bacteriological tests conducted for all the schemes within the WSP * 100
		Bacteriological quality	0.6 * Compliance with planned no. of bacteriological tests + 0.4 * Compliance with bacteriological standards
		Drinking-Water Quality	0.4 * Drinking Water quality, Residual Chlorine + 0.6 * Bacteriological quality
	<b>Hours of Supply</b>	This is the average no. of hours water services are provided per day of all the zones within a scheme	A weighted average of all registered zones, factoring no. of active connections ((hrs*Number of active connections, zone 1) + (hrs*Number of active connection, zone 2) + (hrs*Number of active connections, zone n)



### ANNEX 5: Methodology for Economic Efficiency KPIs

KPI Cluster	Indicator	Indicator elements	computation
Economic Efficiency	Personnel expenditure as a percentage of O+M costs	Total Personnel Expenditure	Sum of personnel expenditures incurred during the reporting period. They include basic salaries, allowances, wages, gratuity, statutory and pension contributions by employer, subscriptions and training levy, leave, Incentives (Bonus) and Any other personnel expenditure.
		Personnel Expenditure as a Percentage of O+M Costs	$(\text{Total personnel expenditures} / \text{Total O+M}) * 100$
	operation and maintenance cost coverage	Total operating revenues A	Sum of billing for water, sewerage and other services. Billing for other services include charges on connection and reconnection, illegal connections, meter rent, meter testing, replacement of stolen meters and exhauster services.
		Total operating expenditures B	Sum of expenses on personnel, BoD, General admin, direct operations, maintenance and levies and fees. 1. Direct operational expenditures include electricity, chemicals and fuel for vehicles. 2. Levies and fees include water abstraction seesaws fees, effluent discharge fees and regulatory levy.
		Operation and Maintenance Cost Coverage	$(A/B) * 100$
	Revenue Collection Efficiency	Total water and sewerage billing amount -A	Total amount of all bills on water and sewerage services during the reporting period of all the schemes within the WSP service area
		Total billing for other services -B	Total of all billing for other services of all the schemes within the WSP service area
		Total Billing	A+B
		Total collection	Sum of all revenue collected of all the schemes within the WSP service area
		Collection Efficiency	$(\text{Total Collection} / \text{Total Billing}) * 100$



## ANNEX 6: Methodology for Operational Sustainability KPIs

KPI Cluster	Indicator	Indicator elements	computation
Operational Sustainability	Non-Revenue Water	Commercial Losses (Apparent Losses) A	Unauthorized consumption (e.g. illegal connections) + Customer meter reading inaccuracies, Estimates and Data Handling errors
		Physical Losses B	Leakages on transmission and /or distribution pipes + Leakages and overflows at utility storage tanks + Leakage on service connections up to the point of customer use
		Non-Revenue Water	$(A+B/ \text{Volume of water produced}) * 100$
	metering Ratio	Total number of active water connections	Sum of all active individual, MDU, yard taps, institutional, schools', commercial, industrial, bulk and other water connections of all the schemes within a WSP service area
		Total number of active metered water connections	Sum of all active individual, MDU, yard taps, institutional, commercial, industrial, schools', bulk and other water connections of all the schemes within a WSP service area that are metered
		Metering Ratio	$(\text{Total number of active metered connections}/\text{Total number active of connections}) * 100$
	Staff Productivity	The total number of staff divided by the total number of connections within the WSP service area	Total number of staff in the utility/ (total number of active water connections + total number of sewer connections)



**ANNEX 7: Detailed Staff Establishment**

	JOB_TITLE	DIRECTORATE									Total
		Commercial Services	Company Secretary	Financial Services	HR and Admin Services	ICT Services	Internal Audit, Risk and Compliance	Managing Director	Technical Services		
1	Accounts Assistant			3							3
2	Accounts Coordinator			1							1
3	Accounts Officer			2							2
4	Accounts Supervisor			1							1
5	Accounts/Finance Supervisor			13							13
6	Administration and Logistics Supervisor				1						1
7	Administration and Logistics Coordinator				1						1
8	Administration and Logistics Manager				1						1
9	Administration and Logistics Officer				1						1
10	Administration Assistant				3						3
11	Administration and Logistics Manager							1			1
12	Administration Clerk				2						2
13	Artisan				1					54	55
14	Artisan Metering	108								1	109
15	Artisan wastewater									21	21
16	Artisan water									171	171
17	Billing and Meter Reading Coordinator	12									12
18	Billing Assistant	24									24
19	Billing Manager	1									1
20	Billing Officer	2									2
21	Billing Supervisor	15									15
22	Cashier			7							7
23	Chemist Officer									5	5
24	Chief Cashier Supervisor			2	1						3
25	CIS Supervisor									2	2
26	Civil Engineering Officer									2	2
27	CMS-Finance Reporting Officer			1							1
28	Commercial Director	1									1
29	Community Development Assistant									23	23
30	Community Development Officer									3	3
31	Community Development Supervisor									6	6
32	Company Secretary		1								1
33	Corporate Affairs Manager							1			1
34	Corporate Accounts Supervisor			1							1
35	Corporate Affairs Assistant							9			9
36	Corporate Affairs Officer							1			1
37	Corporate Affairs Supervisor							1			1
38	Corporate Planning Officer			1							1
39	Corporate Risk Manager							1			1
40	Credit Control Assistant			4							4
41	Credit Control Officer			10							10
42	Credit Control Supervisor			29							29
43	Customer Care Assistant	96									96



	JOB_TITLE	DIRECTORATE									Total
		Commercial Services	Company Secretary	Financial Services	HR and Admin Services	ICT Services	Internal Audit, Risk and Compliance	Managing Director	Technical Services		
44	Customer Care Coordinator	9									9
45	Customer Care Officer	9									9
46	Customer Care Supervisor	18									18
47	Customer Relations Manager	1									1
48	Customer Care Assistant (Switch Board Operator)				2						2
49	Dam Coordinator									3	3
50	Data Analysis Coordinator			1							1
51	Data Analysis Officer			1							1
52	Data Analysis Supervisor									3	3
53	Data Analysis Supervisor			1							1
54	Data Analyst			1				1			2
55	Data Entry Clerk	1		3	1					5	10
56	Data Entry Supervisor									2	2
57	Data Gathering Assistant							1		7	8
58	Database Administrator					1					1
59	Database Administrator Officer					1					1
60	Database Officer				1						1
61	Director of Human Resources and Administrative Services				1						1
62	Disconnection/Reconnection Supervisor	1		23							24
63	Distribution Supervisor									3	3
64	Donor Project Supervisor									3	3
65	Donor Projects Coordinator									1	1
66	Donor Projects Manager									1	1
67	Donor Projects Officer									1	1
68	Driver				149						149
69	Electrical Assistant									25	25
70	Electrical Coordinator									2	2
71	Electrical Supervisor									5	5
72	Electro-Mechanical Assistant									1	1
73	Engineering Coordinator									1	1
74	Engineering Manager									1	1
75	Engineering Officer									3	3
76	Engineering Supervisor									1	1
77	Environment Manager									1	1
78	Environment Assistant									8	8
79	Environment Officer									1	1
80	Environment Supervisor									3	3
81	Environmental Coordinator									3	3
82	ERP Project Manager							1			1
83	Executive Assistant				1						1
84	Executive Secretary				2						2
85	Executive Secretary				5						5
86	Field Research Assistant							9			9





	JOB_TITLE	DIRECTORATE									Total
		Commercial Services	Company Secretary	Financial Services	HR and Admin Services	ICT Services	Internal Audit, Risk and Compliance	Managing Director	Technical Services		
87	Finance Accountant			1							1
88	Finance Director			1							1
89	Finance Manager			1							1
90	Finance Manager - Revenue			1							1
91	Financial Accountant			1							1
92	GIS Assistant									3	3
93	GIS Officer									2	2
94	Government Accounts Coordinator			1							1
95	Ground Maintenance Assistant				2						2
96	Human Resource and Admin Coordinator				11						11
97	Human Resource and Administration Supervisor				14						14
98	Human Resource and Administrative Assistant				5						5
99	Human Resource and Administration Officer				5						5
100	Human Resource Assistant				6						6
101	Human Resource Manager				1						1
102	Human Resource Supervisor				7						7
103	Human Resources Coordinator				1						1
104	Human Resources Officer				2						2
105	ICT Applications Coordinator					2					2
106	ICT Assistant					44					44
107	ICT Assistant-System Applications					1					1
108	ICT Database Administration Manager					1					1
109	ICT Director					1					1
110	ICT Networks Administrator Coordinator					1					1
111	ICT Officer					10					10
112	ICT Security Administrator					1					1
113	ICT Supervisor					8					8
114	ICT System Applications Coordinator					1					1
115	Industrial Relations Coordinator				1						1
116	Industrial Relations Officer				1						1
117	Industrial Relations Supervisor				1						1
118	Informal Settlement Manager								1		1
119	Information Systems Auditor					1					1
120	Infrastructure and Networks Manager					1					1
121	Inspection/Investigation Supervisor								2		2
122	Instrumentation Officer									1	1
123	Insurance Supervisor				1						1
124	Internal Audit Coordinator							1			1
125	Internal Audit Coordinator (Financial Reviews)							1			1
126	Internal Audit Manager							1			1





JOB_TITLE	DIRECTORATE									Total
	Commercial Services	Company Secretary	Financial Services	HR and Admin Services	ICT Services	Internal Audit, Risk and Compliance	Managing Director	Technical Services		
127	Internal Audit Officer - Financial Processes						1			1
128	Internal Audit, Risk and Compliance Services Director						1			1
129	Inventory Officer			1						1
130	Inventory Supervisor			1						1
131	Investigation Officer							1		1
132	Investigation/Monitoring Assistant			2				31		33
133	Investigation/Monitoring Officer							2		2
134	Investigation/Monitoring Supervisor							6		6
135	ISO Commercial Coordinator							1		1
136	ISO Manager								1	1
137	Laboratory Assistant								46	46
138	Laboratory Supervisor								2	2
139	Laboratory Technician								29	29
140	Labourer				2				152	154
141	Legal Coordinator		2							2
142	Legal Officer		3							3
143	Liaison Manager							1		1
144	Library Supervisor				1					1
145	Maintenance Assistant								28	28
146	Maintenance Coordinator								1	1
147	Maintenance Officer								4	4
148	Maintenance Supervisor								15	15
149	Managing Director							1		1
150	Marketing Assistant	241								241
151	Mechanic				2				9	11
152	Mechanical Coordinator								1	1
153	Mechanical Engineer Officer								1	1
154	Medical Administrator				1					1
155	Medical Assistant				2					2
156	Medical Clerk				5					5
157	Medical Supervisor				1					1
158	Meter Reading and Billing Officer	3								3
159	Meter Reading and Billing Coordinator	1								1
160	Meter Reading and Billing Supervisor	3								3
161	Meter Reading Supervisor	53								53
162	Meter Testing Supervisor	3								3
163	Metering Service Officer	1								1
164	Metering Officer	6								6
165	Metering Supervisor	30								30
166	Microbiologist Officer								1	1
167	MT-Civil Engineer								7	7
168	MT-Surveyor								1	1
169	Non-Revenue Water Manager								1	1





	JOB_TITLE	DIRECTORATE									Total
		Commercial Services	Company Secretary	Financial Services	HR and Admin Services	ICT Services	Internal Audit, Risk and Compliance	Managing Director	Technical Services		
170	NRW Meter Testing Artisan									3	3
171	NRW Network Data Supervisor									1	1
172	Occupational, Safety and Health Coordinator				2						2
173	Office Assistant				56						56
174	Operation and Maintenance Manager									1	1
175	Operator									19	19
176	Operator Treatment Works									40	40
177	Operator Wastewater									171	171
178	Operator Water									101	101
179	Payments Officer			2							2
180	Payroll Assistant				1						1
181	Payroll Clerk				4						4
182	Payroll Coordinator				1						1
183	Payroll Officer				1						1
184	Payroll Supervisor				2						2
185	Planning, Monitoring and Evaluation Manager			1							1
186	Planning, Monitoring and Evaluation Officer			2							2
187	Planning, Monitoring and Evaluation Coordinator			1				1			2
188	Planning/Design Assistant									2	2
189	Plant Operator				40						40
190	Procurement Assistant							8			8
191	Procurement Supervisor							1			1
192	Production Manager									1	1
193	Quality Assurance Coordinator									2	2
194	Quality Assurance Manager									1	1
195	Quality Assurance Officer									1	1
196	Radio Operator Supervisor									1	1
197	Radio Operator									12	12
198	Radio Operator Assistant									1	1
199	Regional Finance Coordinator			1							1
200	Regional Finance Coordinator			2							2
201	Regional Manager							6			6
202	Registry Assistant				1						1
203	Registry Assistant (Customer Care Registry)	2									2
204	Registry Clerk				59						59
205	Registry Supervisor (Customer care Registry)	3									3
206	Research and Development Assistant						1				1
207	Research and Development Coordinator						2				2
208	Research and Development Manager						1				1





JOB_TITLE	DIRECTORATE									Total
	Commercial Services	Company Secretary	Financial Services	HR and Admin Services	ICT Services	Internal Audit, Risk and Compliance	Managing Director	Technical Services		
209	Research and Development Officer					1				1
210	Research and Development Supervisor					1				1
211	Research Data Analyst Assistant								2	2
212	Revenue Assistant			11						11
213	Revenue Collection Assistant	2		246					1	249
214	Revenue Collection Supervisor			43						43
215	Revenue Coordinator			3					1	4
216	Revenue Finance Coordinator			5						5
217	Revenue Monitoring Supervisor			2						2
218	Revenue Officer			1						1
219	Revenue Officer			5						5
220	Revenue Supervisor			11						11
221	Risk management Coordinator						1			1
222	Risk Management Assistant						1			1
223	Secretary				29					29
224	Security Assistant							262		262
225	Security Coordinator							2		2
226	Security Manager							1		1
227	Security Officer							7		7
228	Security Supervisor							25		25
229	Sociologist Officer								4	4
230	Sports Assistant				1					1
231	Stores Assistant							9		9
232	Stores Clerk							1		1
233	Stores Coordinator							1		1
234	Stores supervisor							1		1
235	Stores Supervisor							3		3
236	Supply Chain Assistant							27		27
237	Supply Chain Coordinator							2		2
238	Supply Chain Manager							1		1
239	Supply Chain Officer							11		11
240	Supply Chain Supervisor							24		24
241	Survey Coordinator								1	1
242	Surveyor Assistant								3	3
243	Surveyor Officer								2	2
244	Surveyor Supervisor								3	3
245	System Administrator					1				1
246	System Administrator Officer					1				1
247	Systems Application Manager					1				1
248	Technical Coordinator								12	12
249	Technical Director								1	1
250	Technical Officer								6	6
251	Technical Officer - Sewer								6	6
252	Technical Officer- Water								6	6
253	Technical Officer-Operations								1	1





JOB_TITLE	DIRECTORATE									Total
	Commercial Services	Company Secretary	Financial Services	HR and Admin Services	ICT Services	Internal Audit, Risk and Compliance	Managing Director	Technical Services		
254	Technical Supervisor								10	10
255	Technical Waste Water Supervisor								1	1
256	Technical Water Supervisor								5	5
257	Technician Waste Water								37	37
258	Technician Water								49	49
259	Technician Water Supervisor								7	7
260	Telecommunication Engineer Coordinator					1				1
261	Training and change mgt. Coordinator				1					1
262	Training Assistant				2					2
263	Training Clerk				3					3
264	Training Supervisor				1					1
265	Transmission Officer								1	1
266	Transport Assistant				10					10
267	Transport Coordinator				1					1
268	Transport Manager				1					1
269	Transport Officer				1					1
270	Transport Supervisor				11					11
271	Treatment Works Coordinator								5	5
272	Treatment Works officer								1	1
273	Treatment Works Supervisor								26	26
274	Verification Officer			1						1
275	Waste Water Coordinator								1	1
276	Waste Water Officer								3	3
277	Waste Water Supervisor								1	1
278	Water Officer								1	1
279	Water Safety Plan Coordinator								1	1
280	Water Supervisor								1	1
281	Water and Waste Water Officer								1	1
282	Workshop Assistant								6	6
283	Workshop Coordinator								1	1
284	Workshop Officer								1	1
285	Workshop Supervisor								3	3
286	Zonal Commercial Officer	2								2
287	Zonal Meter Reading and Billing Officer	23								23
288	Zonal Meter Reading Officer	2								2
289	Zonal Revenue Officer			26						26
290	Zonal Revenue Supervisor			2						2
	Grand Total	673	6	480	474	84	8	463	124	343
									5	3



## ANNEX 8: References

*Agenda 2030, the Sustainable Development Goals.* (n.d.).

*Audited Financial Accounts.* (2014, 2015, 2016, 2017, 2018).

*AUDP-NEPAD aspirations of Africa We Want in 2063.* (n.d.).

*Financial Reports.* (2014/15-2018/19).

*Human Resource Policies and Manual.* (n.d.).

*Impact Report 11.* (2019). WASREB.

*Kenya Population and Housing Census 2019.* Kenya National Bureau of Statistics. (KNBS).

*Kenyan Economic Blueprint, Vision 2030; MTP III, Water and Sanitation (WATSAN).* (n.d.).

*Nairobi County Integrated Development Plan (CIDP).* (2018-2022).

*Nairobi County Integrated Development Plan for (2018-2022).* (n.d.).

*Nairobi County Strategic Plan (2015-2025).* (n.d.).

*Nairobi Integrated Urban Development Masterplan (NIUPLAN).* (2013).

*National Water Master Plan 2030.* (2013).

*Strategic Plan.* (2014/15-2018/19).

*Strategic Plan Implementation Status Report.* (2014/15-2018/19).

*The Constitution of Kenya.* (2010).

*The Water Act.* (2002).

*The Water Act.* (2016).

*WaRRIS Report.* (2015, 2016, 2017, 2018 & 2019).