

NAIROBI WATER

Improving Reliability

**Nairobi City Water and Sewerage
Company Limited**

STRATEGIC PLAN

2014/15 – 2018/19

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Foreword

Strategic planning is a development phenomenon that has been embraced by almost all sectors of the economy in Kenya and indeed worldwide. The process involves formulation; implementation and evaluation of cross-function decisions that enable an organization achieve its objectives. In other words, strategic planning produces fundamental decisions and actions that shape and guide what an organization is, what it does, and why it does it, with a focus on the future.

Instituting strategic management process marks the beginning of efficient and effectual management system that is forward-looking and more competence-based. As such, any modern business entity that wants to “lead the market instead of being market led” ought to embrace the concept of strategic planning if it has to survive, develop and grow in today’s dynamic and competitive operating environment. Out of this realization, many public institutions, private organizations and civil societies are nowadays increasingly instituting strategic plans for their business operations. Indeed, research has shown that organizations using strategic management are more successful than those that do not.

Water and Sewerage/Sanitation institutions are not exceptional to this development paradigm and that is why Nairobi City Water and Sewerage Company took a bold step, right from its inception, to embrace the concept of strategic planning. The Company pursued two, three-year rolling strategic plans up to June 2010 and a five-year strategic plan spanning between 2011 and 2014/15. Review of 2010/11 to 2014/15 plan shows that from 2010/11 to December 2013, this third plan achieved an estimated overall implementation of 74%. Among the key challenges that constrained 100% achievement included resource constraints especially for undertaking capital expenditure. However, due to the requirements of the 2010 constitutional dispensation, the plan was reviewed in 2014 and succeeded by the current fourth strategic plan, covering the period between 2014/15 and 2018/19. All these plans have been in tandem with the prevailing government’s economic blueprints e.g. the Economic Recovery Strategy for Wealth and Employment Creation (ERS from 2003 – 2007) and its successor, the Vision 2030 and it’s implementing five-year Medium Term Plans.

Beyond development, successful implementation of the plan requires concerted efforts of all stakeholders. We are therefore calling upon all stakeholders to rise to this call and contribute to the betterment of this institution. It is expected that successful implementation of the plan will catapult the Company to higher levels of prosperity for enhanced and sustained effective and efficient service delivery.



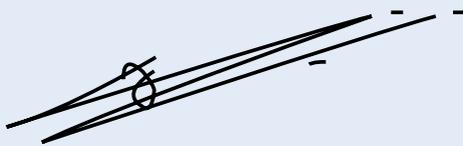
Mr. Peter Kuguru
CHAIRMAN, BOARD OF DIRECTORS

Preface

Development of this strategic plan adopted a participatory approach in analyzing the plan-implementation gaps of the previous plans; identifying the key priority areas and charting the key strategies to be pursued in the plan period (2014/15 - 2018/19). This participatory process revised the Vision and Mission statements, core values and identified eight (8) strategic themes to be pursued: 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, and brand equity and institutional strengthening. The plan has also taken cognizance of the current environment and the emerging issues.

All the key stakeholders (the National Government through the Ministry in charge of Water; the Nairobi City County Government, which wholly owns the Company; WaSREB, the Company's Board of Directors, management, staff and customers) are called upon to effectively play their respective roles to ensure successful implementation of the plan. This is in recognition that in an organizational setting, there is need to coordinate goals so that they do not conflict with each other. The goals of one part of the organization should mesh with those of other parts of the organization.

To effectively implement the plan, resources estimated at KShs. 42 billions over and above the regular operations expenditure will be required. On its part, the company commits itself to provide and mobilize the requisite resources to finance the identified investments projects geared towards meeting the identified objectives. In addition, deliberate efforts will be done to institute a mechanism for annual review with a view to assessing progress of implementation and therefore addressing plan-implementation gap(s). Such reviews will avail opportunities for the stakeholders to take stock of not only the implementation-enhancing lessons but also of the constraints, and thus devise strategies of overcoming such implementation constraints.



Eng. Philip Gichuki
MANAGING DIRECTOR

List of Acronyms and Abbreviations

AfWA	–	African Water Association
AMR	–	Automatic Meter Reading
AWSB	–	Athi Water Services Board
BOD	–	Board of Directors
CBD	–	Central Business District
CBO	–	Community Based Organization
CCTV	–	Closed-Circuit Television
CFA	–	Community Forest Association
COFEK	–	Consumers Federation of Kenya
CP	–	Communication Policy
CSR	–	Corporate Social Responsibility
DC	–	Developing Country
EIA	–	Environmental Impact Assessment
EMS	–	Environmental Management System
ERS	–	Economic Recovery Strategy
FOG	–	Fuel, Oil and Gases
FSMS	–	Food Safety Management System
FY	–	Financial Year
GIS	–	Geographic Information System
GMR	–	Global Monitoring Report
HC	–	High Consumer
ICT	–	Information Communication Technology
ISO	–	International Organization for Standardization
IWA	–	International Water Association
KARA	–	Kenya Alliance of Resident Associations
KEBS	–	Kenya Bureau of Standards
KEPSA	–	Kenya Private Sector Alliance
KFS	–	Kenya Forest Service
KM	–	Kilometre
KPI	–	Key Performance Indicator
LIMS	–	Laboratory Information Management System
MD	–	Managing Director
MDG	–	Millennium Development Goal
M & E	–	Monitoring and Evaluation
MT	–	Meter Testing
NCWSC	–	Nairobi City Water and Sewerage Company
NEMA	–	National Environment Management Authority
NRW	–	Non Revenue Water
PDS	–	Privately Developed Sewers
PPP	–	Polluter Pay Principle
QMS	–	Quality Management System
R&D	–	Research and Development

SDGs	–	Sustainable Development Goals
SIC	–	Strategy Implementation Committee
WAG	–	Water Action Group
WARREC	–	Water Research Resource Centre
WARMA	–	Water Resources Management Authority
WASPA	–	Water Service Providers Association
WaSREB	–	Water Services Regulatory Board
WHO	–	World Health Organization
WRUA	–	Water Resources Users Association
WSP	–	Water Safety Plans/Water Service Provider(s)

Executive Summary

Nairobi City Water and Sewerage Company Limited (NCWSC) was incorporated in December 2003 under the Companies Act Cap. 486 to provide clean water and sewerage services to the residents of Nairobi County, in a sustainable manner and within the Government regulations. In pursuit of its mandate, the company undertook to formulate a strategic plan that will guide its operations in the period 2014/15 – 2018/19. The strategic plan was developed through a participatory approach, which ensured views of the key stakeholders were incorporated. The participation was through discussions, consultations and workshops.

A situational analysis was carried out to evaluate the past performance of the Company, identify the strengths, weaknesses, opportunities and threats, and to determine the strategic themes for the planning period. The identified strategic themes formed the basis for setting objectives of NCWSC for the planning period as well as strategies that would enable the achievement of the objectives. The eight themes identified are:

1. Enhanced and sustainable quality water sources, production and storage;
2. Optimized transmission and equitable distribution of quality water;
3. Reduction of Non Revenue Water;
4. Wastewater management;
5. Revenue growth and customer loyalty;
6. Financial stewardship;
7. Human resource management; and
8. Brand equity and institutional strengthening.

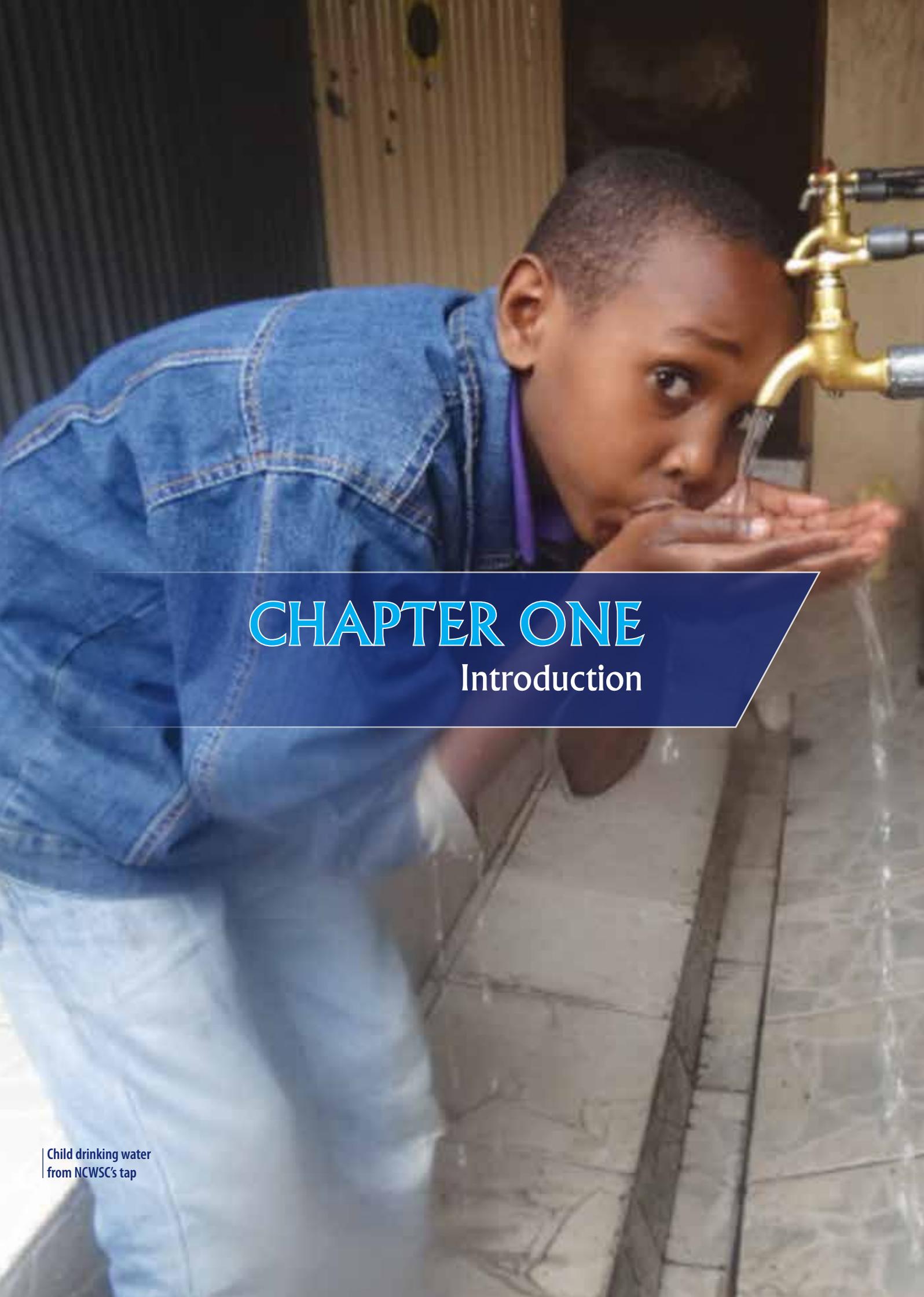
To deliver on the identified strategic themes, the Company identified twenty objectives that would enable it fulfil its mission. These are:

1. To enhance the water sources capacity to meet 2019 demand of 782,000m³/day by December 2018/19.
2. To ensure 100% compliance to NCWSC's water quality standard as adopted from WHO and KEBS.
3. To sustainably transmit and distribute 770,000m³/day by June 2019.
4. To reduce Non Revenue Water from 40% to 16% by June 2019.
5. To efficiently collect, convey, treat and dispose off 400,000m³/day of wastewater in an environmentally friendly manner by 2018/19.
6. To grow the sales volume from 60% to 84% of the production by June 2019.
7. To increase the customer base from 280,000 to 400,000 by June 2019.
8. To increase customer satisfaction level from 69% to 90% by June 2019.
9. Increase revenue collection from 94% to 98% by 2018/19.
10. Increase the current revenue base by 68% (from kshs. 6 billion to Kshs.10.08 billion) by 2018/19.
11. Reduce accounts receivables of Kshs. 9 billion to not more than Ksh. 4.5 billion by 2018/19.
12. Reduce the level of accounts payables from KShs. 3.9 billion to KShs. 1.3 billion by 2018/19.
13. Secure external funding of up to Kshs 20 billion by 2018/19.
14. Ensure 100% automation and integration of all business processes by June 2019.
15. To ensure 100% safety and optimal utilization of company resources.
16. Improve staff productivity level from 65% to 90% by June 2019.
17. Improve employees' satisfaction level from 68% to 80% by June 2019.

18. To have a Nairobi City Water Tower in place by June 2019.
19. Improve the level of brand equity from 35% to 100% by 2018/19.
20. Strengthen Company's partnership with stakeholders at national, regional and international levels.

In order to realize these objectives, strategies and appropriate activities for each objective were identified. In addition, the implementing actors, the time frame, the expected output and their indicators were determined. These have been documented in an implementation plan presented in chapter five of this strategic plan.

To enable tracking of the progress made towards the achievement of the set objectives, annual key performance indicators were identified. In addition, a monitoring and evaluation framework that will help enhance successful implementation of the strategic plan has been provided and a cross-functional Strategy Implementation Committee (SIC) constituted. The monitoring and evaluation framework takes cognizance of the changing operating environment and therefore, provides for annual review of the strategic plan.

A young boy with short dark hair, wearing a blue denim jacket and light blue jeans, is leaning over a public water tap. He is drinking water from his hands, which are cupped under the stream of water. The tap is brass and mounted on a wall. The background is a wooden wall. The floor is made of grey tiles.

CHAPTER ONE

Introduction

Child drinking water
from NCWSC's tap

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. It has its headquarters in Nairobi, Kampala Road, Industrial Area and has its area of jurisdiction divided into six administrative regions, namely: Northern, Eastern, North Eastern, Central, Southern and Western which are further devolved into 25 zones. 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 3.8 million and projected to grow to 4.5 million by 2018/19.

The 2002 Water Act brought about reforms in the Water Sector that were aimed at facilitating access to clean water and sewerage services to all Kenyans. The reforms saw the creation of regional Water Boards which were tasked with the responsibility of overseeing the operations of water and sewerage/sanitation utilities in their respective areas of jurisdiction, besides major asset development. Within this structure, NCWSC was under Athi Water Services Board (AWSB). The Water Act 2002 is under review with the draft Bill providing for establishment of Water Works Development Boards in place of the Water Service Boards.

1.2 NCWSC, MDGs/SDGs and The Kenya Constitution, Vision 2030, Second Medium Term Plan and the Water Sector Strategic Plan

Water sector relates to actors in almost all other sectors of the economy. At the international arena, the Millennium Development Goal (MDG) No. seven targets at halving the proportion of people living without sustainable access to safe drinking water and basic sanitation by 2015. According to World Bank's 2011 Global Monitoring Report (GMR), two thirds of the developing countries (DCs) are on target to achieve this MDG. On the access to drinking water, 50% of the DCs (66 countries) are on target, 30% (39 countries) are close to being on the target while 20% (27 countries) are far behind the target. Among the low-income countries, 13 have achieved or are on target. For the access to sanitation, 27% of DCs (35 countries) are on target, 28% (37 countries) being close to the target while 45% (58 countries) are behind the target. Among the low income countries, only four countries are on target to achieve the goal, Rwanda being the only sub-Saharan country which is on track. It is imperative to note that Kenya, as one of the low income countries, is categorized by GMR among the 27 DCs which are far behind achieving MDG number seven. In the East African region, only Rwanda is on track to achieving the goal and across sub-Saharan Africa, eight countries are on target (Ghana, Gambia, Malawi, Comoros, Rwanda, Benin, Burkina Faso and Guinea). The second Medium Term Plan (2013-2017) indicates that according to 2009 Housing and Population Census, 27.9% of the population obtained piped water from water service providers.

One of the main outcomes of the 2012 Rio+20 Conference was the agreement by member States to launch a process to develop a set of Sustainable Development Goals (SDGs), which will build upon the Millennium Development Goals. It was decided to establish an "inclusive and transparent intergovernmental process open to all stakeholders, with a view to developing global sustainable

development goals to be agreed by the General Assembly”. There was broad agreement that the two processes (MDGs and SDGs) should be closely linked and should ultimately converge in one global development agenda beyond 2015 with sustainable development at its core. The Rio+20 Outcome document states that the SDGs should address and incorporate in a balanced way all three dimensions (economic development, social development and environmental protection) of sustainable development and their inter-linkages.

Whereas the specific SDGs are being developed in a consultative process at global, regional and national levels, 19 areas of focus have been identified. One of these areas of focus is sub-sector’s specific on water and sanitation. For a water-secure world and for the realization of the right to safe drinking water and sanitation, the whole water cycle has to be taken into consideration to tackle water-related challenges. Some areas that could be considered include:

- (i) ensuring access to safe and affordable drinking water and adequate sanitation for all, especially for women and girls, including in households, schools, health facilities, workplaces and refugee camps;
- (ii) providing adequate facilities and infrastructure, both built and natural, for safe drinking water and sanitation systems in all areas;
- (iii) extending wastewater treatment, recycling and reuse;
- (iv) improving water-use efficiency;
- (v) bringing fresh water extraction in line with sustainable supply;
- (vi) enhancing effective water governance including catchment area based integrated water resources management and appropriate trans-boundary co-operation;
- (vii) expanding water-related vocational training at all levels;
- (viii) protecting and restoring water-linked ecosystems like mountains, watersheds and wetlands;
- (ix) eliminating the pollution and dumping of toxic materials in water bodies, and protecting aquifers;
- (x) eliminating of invasive alien species in water bodies;
- (xi) investing in water harvesting technologies; and
- (xii) reducing risks and impacts of water-related disasters.

Against the above background, NCWSC five year strategic plan is expected to provide the company with a strategic direction and assist it achieve efficacy in tandem with the planned international and national water sector goals of the government of Kenya. In this regard, this strategic plan is aligned and aims to fulfil the aspirations of the following sector policies:

1.2.1 The Kenya Constitution

Constitution of Kenya recognizes provision of water and sanitation services as a basic right as provided for in articles 43 (1) subsections b and d.

1.2.2 The Vision 2030 and Medium Term Plan (2013-2017)

In the Kenya's economic blue print Vision 2030, the government aspires to ensure improved and increased accessibility to both safe water and sanitation services beyond present levels by the year 2030. The specific strategies include:

- (i) Raising the standards of the country's overall water, resource management, storage and harvesting capacity;
- (ii) Rehabilitating the hydro-meteorological data gathering network;
- (iii) Constructing multipurpose dams; and
- (iv) Constructing water and sanitation facilities to support industries and a growing urban population.

The Vision 2030's Social pillar seeks to build "a just and cohesive society with social equity in a clean and secure environment" by investing in security, infrastructure, public sector reforms and people development. According to 2009 Kenya National Bureau of Statistics (KNBS's) Population Census, 76% of Households in Nairobi have piped water and NCWSC accounts for 28% of national water coverage (See Table 1). During the 2014/15 – 2018/19 plan period, the company envisages increasing its relative contribution to the achievement of the sub-sector's overall goal.

Table 1: Overall households with piped water by province/district

	PIPED INTO DWELLING	PIPED	TOTAL PIPED	TOTAL	% of H/ Holds with Piped Water	% CONTRIBUTION of piped water BY REGION
Area	A	B	C = A+B	D	E = (C/D)%	F (Regional contribution to total)
KENYA	602,884	2,023,745	2,626,629	8,767,954	30%	100%
NAIROBI	230,704	514,943	745,647	985,016	76%	28%
CENTRAL	112,253	374,841	487,094	1,224,742	40%	19%
COAST	55,457	283,378	338,835	731,199	46%	13%
EASTERN	60,338	305,832	366,170	1,284,838	28%	14%
NORTH EASTERN	4,908	31,322	36,230	312,661	12%	1%
NYANZA	15,649	85,899	101,548	1,188,287	9%	4%
RIFT VALLEY	110,753	377,462	488,215	2,137,136	23%	19%
WESTERN	12,822	50,068	62,890	1,804,749	3%	2%

Source: KNBS, 2009 Population and Housing Census, Volume II

According to 2009 KNBS's Population Census, 48 % of Households in Nairobi are connected to the main sewer and NCWSC accounts for 70% of national sewerage coverage (see Table 2). During the 2014/15 – 2018/19 plan period, the company has planned various investments to enhance its relative contribution to the achievement of sewerage coverage overall goal.

Table 2: Overall households by main source human waste disposal

REGION	MAIN SEWER	SEPTIC TANK	CESS POOL	VIP PIT LATRINE	PIT LATRINE COVERED/ UNCOVERED	BUCKET	BUSH	OTHER	TOTAL	MAIN SEWER as % of Total	Regional Contribution to Main Sewer
	A	B	C	D	E	F	G	H	I = A+B+C+D+E+F+G+H	J = (A/I)%	K (Regional Contribution to total sewer in column A)
KENYA	674,541	299,030	29,881	430,827	6,100,234	22,828	1,196,509	14,104	8,767,954	8%	100%
NAIROBI	469,830	95,410	10,489	26,477	370,463	5,205	3,962	3,180	985,016	47.7%	69.7%
CENTRAL	46,456	61,186	3,227	83,576	1,025,499	1,164	3,049	585	1,224,742	3.8%	6.9%
COAST	42,233	57,037	5,514	39,012	403,917	4,615	177,671	1,200	731,199	5.8%	6.3%
EASTERN	20,299	21,771	3,033	91,685	1,008,090	894	137,365	1,701	1,284,838	1.6%	3.0%
NORTH EASTERN	1,394	1,267	435	4,025	100,110	7,136	197,094	1,200	312,661	0.4%	0.2%
NYANZA RIFT VALLEY	15,771	8,438	993	41,573	909,881	1,026	208,410	2,195	1,188,287	1.3%	2.3%
WESTERN	70,431	47,873	5,186	95,481	1,470,781	1,959	443,016	2,409	2,137,136	3.3%	10.4%
WESTERN	8,127	6,048	1,004	48,998	811,493	829	25,942	1,634	904,075	0.9%	1.2%

Source: KNBS, 2009 Population and Housing Census, Volume II

To ensure the Vision's strategies are on course, the government in its current Medium Term Plan 2013 – 2017 commits itself to strengthening the country's economic competitiveness through accelerated governance and public sector reforms by increasing government spending on expansion and modernization of water infrastructure. Among the specific programmes targeted include:

- (i) Urban Water Supply Sub-programme which involves clustering of water supply in the counties to improve supply sustainability. Key towns targeted are Nairobi, Mombasa, Kisumu and Nakuru.
- (ii) Rural Water Supply Sub-programme aiming at constructing and rehabilitating 150 rural water schemes annually. With implementation of clustering, some of the rural areas within the environs of Nairobi City County may be served by NCWSC.
- (iii) Operationalization of Water Research Resource Centre (WARREC) to capture emerging issues, trends and technologies in the broad water sector. During the 2014/15 – 2018/19 plan period, NCWSC will collaborate with WARREC in undertaking relevant sector research to exploit market opportunities in terms of best practices and technologies.
- (iv) Provision of water to poor un-served areas including informal settlements programme that will, among other things, explore opportunities of subsidies through Water Service Providers (WSPs) to meet the basic water services supply in the informal settlements. NCWSC puts a lot of emphasis in enhancing service provision to the informal settlements. Indeed, the company has a fully-fledged department focusing specifically on informal settlements. During the 2014/15 – 2018/19 plan period, the company will devote its own resources and mobilize others from other stakeholders with a view of improving water and sewerage services in these vulnerable areas.

1.2.3 Water Sector Strategic Plan

Water Sector Strategic Plan 2009 to 2014, specifically strategic objective number six, is geared towards increasing and modernizing the urban sewerage services, including *eco-san* (ecological sanitation) systems through the following strategic Objectives:

- i. To consolidate the effort of sustainable water resources management and development. In its 2014/15 – 2018/19 plan, NCWSC will, together with other stakeholders, put a lot of emphasis on management of catchment areas and transmission. Specific strategies and actions to achieve this are captured in the implementation plan detailed in chapter five of this plan.
- ii. Rehabilitation, augmentation and expansion of existing urban sewage collection, treatment and disposal systems. NCWSC has identified wastewater management as a specific standalone theme during the 2014/15 – 2018/19 plan and also in the immediate ending 2010/11 – 2014/15 plan.
- iii. Construction of new urban sewage collection, treatment and disposal systems. During the 2014/15 – 2018/19 plan period, the company, in collaboration with other stakeholders, will rehabilitate Dandora and Kariobangi sewer treatment plants.
- iv. Construction of appropriate on-site waterborne sewage systems in informal urban areas. The Company has identified strategies of increasing ablution blocks and stand-alone toilets in the informal settlements during the 2014/15 – 2018/19 plan period.
- v. Systematically increase user connections to cover all potential areas. NCWSC plans to increase connections from the current 280,000 to 400,000 by 2018/19.
- vi. Develop a water re-use strategy and policy including standards, appropriate technology, wastewater facilities, etc. The company has identified recycling of waste water as one of its strategies to be pursued during the 2014/15 – 2018/19 plan period.
- vii. Increase use of non-water-based (e.g. *eco-san*) sewerage systems. During the 2014/15 – 2018/19 plan period, NCWSC has identified embracement of appropriate technologies as one of its strategies for enhanced wastewater management. Such technologies could be non-water based. In addition, the company will collaborate with other stakeholders, under public - private partnership for enhancement of sewerage coverage.

1.3 Rationale for the Strategic Plan

The role of strategic planning is to help an organization identify and select the most appropriate ways of using the skills and resources it has to achieve specified objectives, while taking into account the external environment in which it operates. The demand for NCWSC's services has been increasing, owing to changing demographic trends in the City.

With its 2010-2014 strategic plan nearing an end, there was need for NCWSC to develop a new strategic plan that not only took cognizance of milestones achieved so far but also changes occurring in the internal and external operating environment. The current strategic plan envisages reducing the gap between demand and supply of water and sewerage services in Nairobi City County.

1.4 Planning Assumptions

In developing the strategic plan, the following assumptions were made:

- (i) That there will be no adverse changes in National and County governments' policies.
- (ii) That the country's economic growth will remain on the upward trend for the next five years.

1.5 Process of Developing the Plan

Participatory strategic planning process was used in developing this strategic plan. This ensured incorporation of the views of the various stakeholders in the resulting plan. The process entailed consultations with NCWSC's Management and the Board of Directors. Specifically, the methodology comprised pre and post workshop discussions, and a strategic planning workshop with the Management.

1.5.1 Strategic Planning Workshop

The strategic planning workshop was held from 5th– 8th March, 2014 at Kenya School of Law, Nairobi. The workshop was consultant-driven and resulted into development of a draft strategic plan for the company. The draft strategic plan was presented to the Board of Directors for review and comments.

1.5.2 Post-Workshop Discussions

Further discussions were held with the Board of Directors and management aimed at enriching the draft strategic plan. The discussions resulted in conclusion of the process by a way of approval of the strategic plan by the Board of Directors (BOD) on 22nd March 2014 to come up with a final strategic plan for NCWSC.

1.6 Organization of the Plan

This strategic plan consists of eight chapters.

Chapter one is the introduction, which covers the Nairobi City Water and Sewerage Company's background, NCWSC's relationship to the Constitution of Kenya, Vision 2030, Second Medium Term Plan and the Ministry Strategic Plan, the rationale for strategic planning, planning assumptions, the process of developing the plan and organization of the plan.

Chapter two presents the institutional review covering NCWSC's mandate and core functions, vision, mission and core values.

Chapter three presents situational analysis covering evaluation of the company's past performance, the internal and external environment analysis and stakeholder analysis.

Chapter four presents strategic analysis which covers strategic themes, objectives and strategies.

Chapter five provides the strategy implementation, which covers for each of the strategic objectives, the strategies, expected outcomes, activities, output indicators, time frame and implementing actors.

Chapter six covers the estimated costs of implementing the strategic plan. Chapter seven covers the organization structure.

Chapter eight presents the risk management framework and mechanisms for monitoring and evaluation of the implementation process and the key performance indicators.

The Implementation status of the immediate preceding plan and the various identified projects are presented as Annex 1 and 2 respectively.

CHAPTER TWO

Institutional Review

Vision

2.0 Institutional Review

This chapter contains a description of the Company's core business, vision, mission and core values.

2.1 Core Business

The core business of Nairobi City Water and Sewerage Company is to supply water and provide sewerage services to the residents of Nairobi City County. In pursuit of the core business, the company identified the Value Chain depicted here in below:

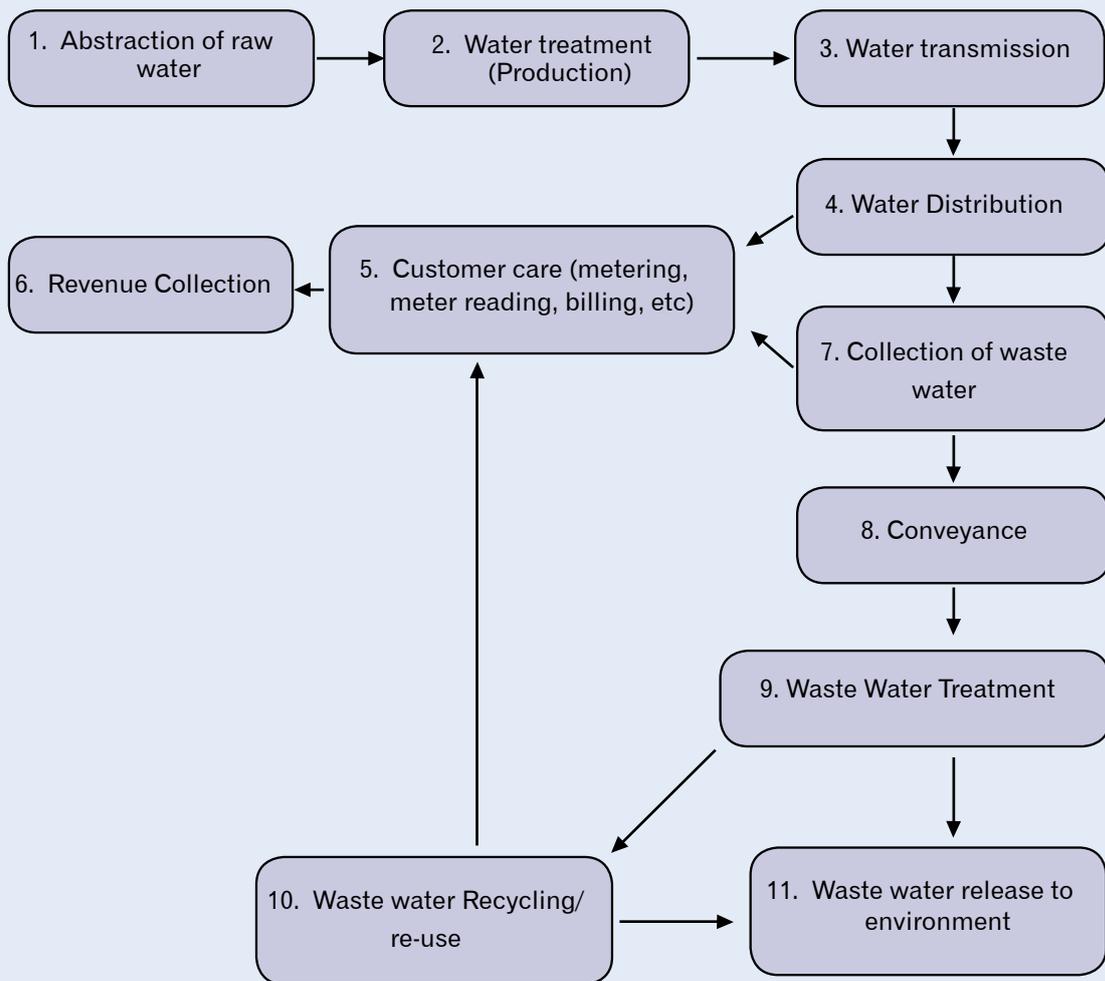


Figure 1: Value Chain Analysis

The activities included in each of the value chain elements are explained as follows:

1. Abstraction of Raw Water	2. Water Treatment	3. Water Transmission	4. Water Distribution	5. Customer Care	6. Revenue Collection	7. Collection of Waste Water
-Intake works -Transmission -Raw Water Storage	-Chemical feeding & storage -Mixing -Sludge settlement -Filtration -Finished water storage	-Transmission mains -Storage -Trunks Pumping	-Storage -Distribution mains -Pumping Pipes and Valves	-Metering -Meter reading -Billing -Resolving of complaints	-Disconnection Reconnection of meters -Actual collection -Updating payments with agencies -Adjusting of customers accounts	-Sewer connections -Exhauster Services -Maintenance of sewer reticulation system(Unblocking/Flushing)
8. Conveyance	9. Waste Water Treatment	10. Waste Water Reuse/Recycling	11. Waste Water Release To Environment			
-Trunk sewers - Unblocking of sewers -Repair of sewer lines	-Screening -Disposal of debris/ screened materials -Anaerobic / Facultative/ Maturation	-Advance Waste Water Treatment -Energy generation -Water for industry/ Agriculture	-Discharge of water into rivers/ streams			

The above value chain is supported by the following support functions;

1. Finance and strategy
2. Supply chain
3. Legal and security
4. ICT and R & D
5. Internal Audit and Risk Management
6. Human Resource and Administration
7. Planning, Monitoring and Evaluation

2.2 Vision, Mission and Core Values

2.2.1 Vision

To be a world class provider of water and sewerage services.

2.2.2 Mission

Provide reliable quality water and sewerage services in an environmentally friendly manner that delights customers within Nairobi City County.

2.2.3 Core Values

- (i) Accountability
- (ii) Customer Focus
- (iii) Commitment
- (iv) Creativity and innovation
- (v) Integrity
- (vi) Professionalism
- (vii) Team work

A scenic view of a city with a prominent tower and a lake. The tower is a tall, cylindrical structure with a dark, flat top. The lake is in the foreground, reflecting the sky and the buildings. The sky is blue with some clouds. The text 'CHAPTER THREE' is written in large, blue, outlined letters, and 'Situational Analysis' is written in white, sans-serif letters below it. The background shows various city buildings and greenery.

CHAPTER THREE

Situational Analysis

3.0 Situational Analysis

3.1 Evaluation of Past Performance

A review of NCWSC's past performance on the third 2010/11 – 2014/15 plan was undertaken in order to isolate those factors that have contributed to favourable or unfavourable results. This was carried out through an analysis of the Company's key performance indicators on the eleven themes that the plan pursued. Overall, the implementation status as at December 2013 was 74% as detailed in the Annex 2. Factors that enabled this performance include company's experience in executing strategic plans, annual monitoring and reviews, management and staff commitment. Among the factors that may have constrained better performance are limited resources especially for undertaking capital development, lack of approval of the plan by the Board of Directors and limited participatory approach in its development. All these factors have been taken into consideration for the current 2014/15 – 2018/19 plan.

Below are more details of five key operational performance indicators (Production, Non-Revenue Water (NRW), Revenue Collection, Water Network Extensions and Sewer Network Extensions and Rehabilitations).

3.1.1 Production - 2010/2011 to 2012/2013

During the first three years of the planned period, the company targeted to gradually improve water production from 168.2 million m³ in the FY 2010/11 to 184 million m³ in the FY 2012/13. In the FY 2011/12, 177 million m³ of water was produced against the targeted 167.7 million m³ resulting to a performance of 106%. Against a target of producing 184 million m³ in the FY 2012/13, the company produced 190.4 million m³ of water translating to a performance of 103.5%. From this analysis, there was a gradual increase on water produced during the first three years of planned period as illustrated in the graph below.

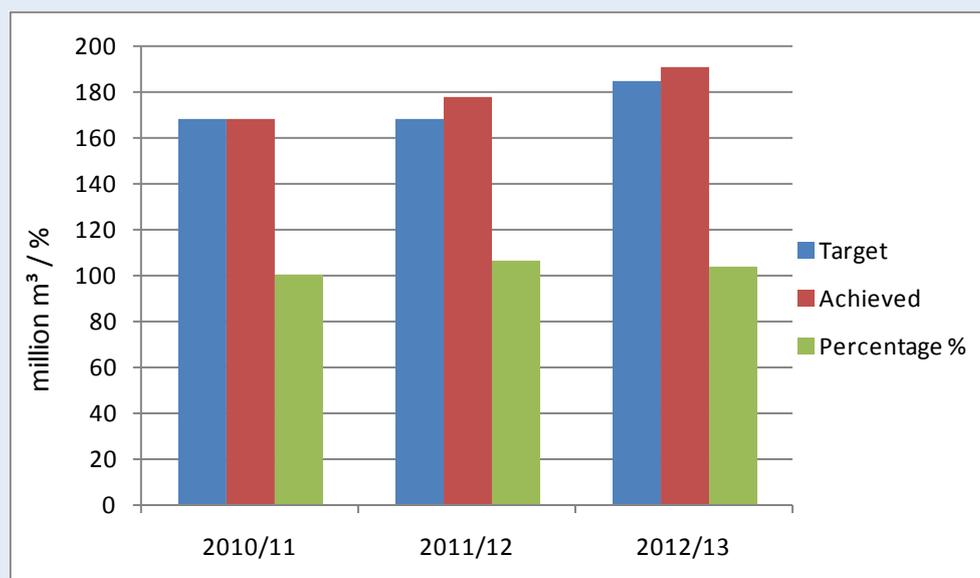


Figure 2: Water production

3.1.2 Non-Revenue Water

Non- Revenue Water is a challenge to most Water Service Providers including NCWSC. Indeed, high non-revenue water affects technical efficiency and denies the company revenue. In the period under review, NCWSC targeted to reduce NRW from 40% to 30% by 2014. To meet this target, during the period, NCWSC established NRW Department mandated to coordinate and actualize all planned activities towards reducing high volume of NRW to acceptable levels. In the FYs 2010/11, 2011/12 and 2012/13 of the planned period, the company targeted to reduce NRW to 38%, 36% and 34% respectively. The actual performance posted in those respective FYs was 37%, 39.5% and 39.8%. This performance is mainly due to low investments in projects aimed at reducing NRW.

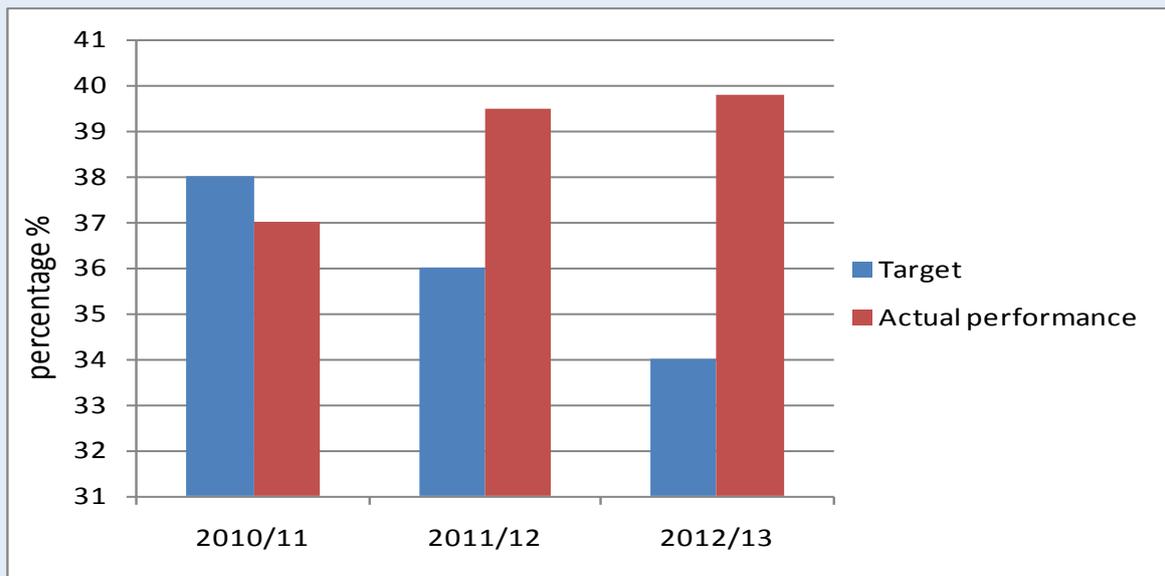


Figure 3: Non Revenue Water

3.1.3 Revenue Collection

During 2010/11, 2011/12 and 2012/13 FYs, NCWSC had planned to collect Kshs. 5.5 billion, 5.8 billion and 6.0 billion respectively. The actual collection was Ksh 4.3 in 2010/11, Kshs. 4.9 billion in 2011/12 and Ksh. 5.3 billion in 2012/13 translating to 78%, 84% and 89% performance achievement for the three respective financial years resulting into 84% overall performance as presented in the figure below.

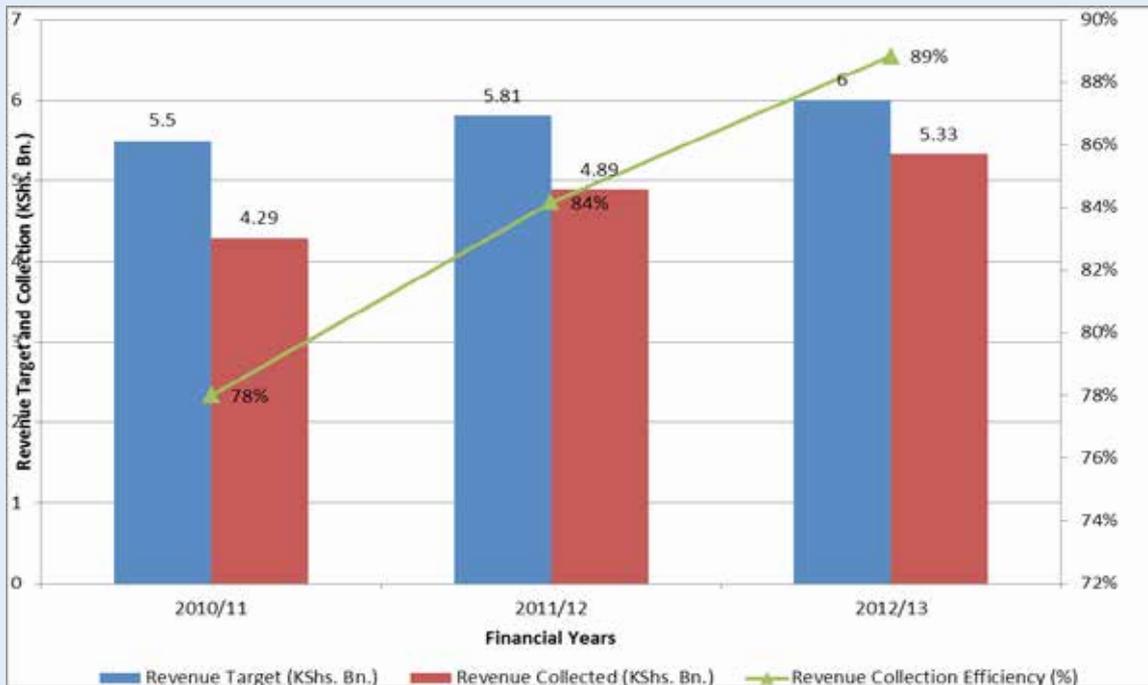


Figure 4: Revenue Target, Collection and Collection Efficiency

3.1.4 Water Network extensions

To adequately meet the growing demand of water in Nairobi, the company planned during the period to extend the water supply network by 125KM by the year 2015. In the financial year 2010/11 out of 25KM of water pipeline extension targeted 27KM was achieved. In the second year of the planned period (2011/12) 25KM was targeted and 14.5KM realized. Of the planned 25KM in year 2012/13, 29.8KM was achieved.

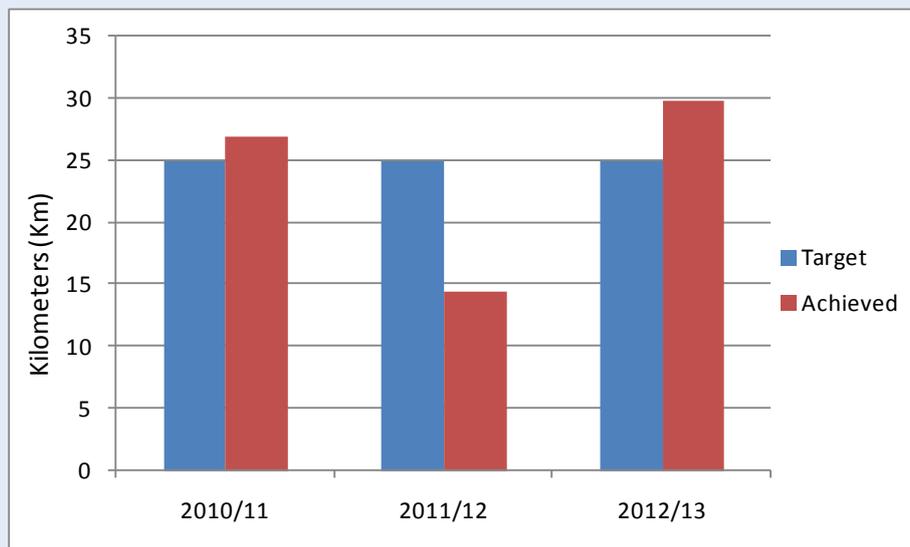


Figure 5: Network Extensions

3.1.5 Sewer Networks Extension and Rehabilitations

To adequately handle and manage the resultant waste water arising from the use of treated water, the company during the planned period, envisaged to extend sewer coverage in Nairobi by 60KM at an equitable staggering length of sewer pipeline line extension of 12KM annually within the five

year planned period. Against these targets, 8KM, 3.1KM and 8.2KM were achieved in the financial years 2010/11, 2011/12 and 2012/13 respectively.

For sewer rehabilitations, the company targeted 250KM for the plan period translating to 50KM per year. Against this annual target, the company managed performance of 11.3 KM, 43KM and 8.4KM for the financial years 2010/11, 2011/12 and 2012/13 respectively.

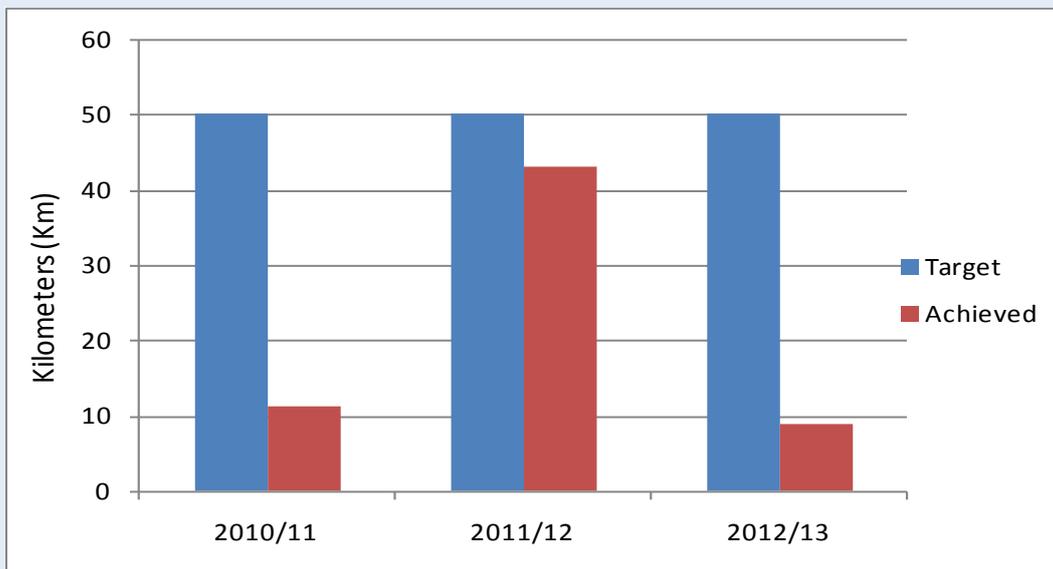


Figure 6: Sewerage Network Rehabilitations

3.2 Internal Environment

Analysis of the internal environment was carried out in order to identify factors within NCWSC that may influence performance positively (strengths) or negatively (weaknesses). The analysis was undertaken through a review of the company's value chain and support services. The outcome of the analysis is as captured below.

3.2.1 Strengths:

- a. Established core infrastructure;
- b. Qualified and experienced human resource;
- c. Compliance with water quality standards;
- d. Quality Management Systems (ISO 9001-2008) certification;
- e. Customer confidence in the product;
- f. Embracement of ICT;
- g. NEMA lead Agency for Water and Sewerage;
- h. Availability of numerous Business Centres;
- i. Existence of documented Risk and Control Framework;
- j. Documented Water Safety Plans Framework;
- k. Strong market edge/big customer base; and
- l. Collaboration with international community on water and sanitation issues.

3.2.2 Weaknesses:

- a. High water supply deficit
- b. Inadequate responsiveness of organizational structure
- c. Staff rationalization
- d. Dilapidated infrastructure
- e. Low automation level
- f. Ageing staff
- g. Inadequate ICT infrastructure
- h. Slow uptake of new technology
- i. Lack of integrated systems
- j. Resistance to change
- k. Low integrity among some staff
- l. High non-revenue water
- m. Inadequate skilled low-cadre staff
- n. High historical debt
- o. High levels of accounts payables
- p. Inadequate work supervision/tools
- q. Non-compliance to regulatory waste water management standards
- r. Low sewerage coverage

3.3 External Environment

The analysis of the external environment identifies factors outside the control of the organization that could, if they crystallize, impact on performance positively (opportunities) or negatively (threats). The analysis was undertaken through a review of the Political, Economic, Social, Technological, Legal and Environmental (PESTLE) factors which are outside NCWSC's control. The outcome of the analysis is as presented in Table 3.

Table 3 Opportunities and threats to NCWSC

Aspect	Opportunity	Threats
Political Environment <ul style="list-style-type: none"> • Devolved Governance • Institutional Policy 	Political good will and support	<ol style="list-style-type: none"> 1. Conflict in the trans boundary water sources 2. Competition of water resources 3. Political interference of set priorities
Economic Access to funds	Access to funds– internal or external high willingness of lenders Regular tariff review	<ol style="list-style-type: none"> 1. High costs of living eroding the ability to pay 2. Generic competition- 3. Urban farming 4. Vandalism 5. Illegal connections 6. Government restrictions of budgetary allocation 7. High taxation

Aspect	Opportunity	Threats
Social	<ol style="list-style-type: none"> 1. Rural urban migration increasing customers base 2. Likelihood of funding to meet the basic needs 	<ol style="list-style-type: none"> 1. Water is a basic human right – hence attitude for free access 2. Increasing demand by the locals for employments 3. Mushrooming informal settlements 4. Changing demographic(gated communities, life style change, rapid population growth) 5. Emerging terminal illnesses/chronic illnesses 6. Emerging gangs in informal settlements
Technological	<ol style="list-style-type: none"> 1. Emerging technologies allow us to operate cost effectively 2. Decentralized waste water treatment 3. Alternative chemicals for water treatment 	<ol style="list-style-type: none"> 1. Competition- expansion in some areas for customers especially gated communities
Legal	<ol style="list-style-type: none"> 1. Enforcement of the polluter pay principle (3Ps) 2. NEMA regulations enhancing controls 3. Enforcement of Wetland protection Act 4. Near monopoly status for the business 5. Drafting water regulations at County level 	<ol style="list-style-type: none"> 1. Inadequate and unharmonized legal frameworks like the water rules/ by laws, prosecutorial powers, draft water policy 2. Land Act – on subdivision 3. Unclear policy on taxation
Environmental	<ol style="list-style-type: none"> 1. Strategy to increase forest cover to 10% (Government) 2. Emerging carbon credit policy 3. Organic farming 4. New sources of water like recycling, rainwater harvesting 5. Social drive to increase forest cover 6. Energy production and re-use 	<ol style="list-style-type: none"> 1. Changing weather patterns/ Global warming 2. Deforestation 3. Encroachments 4. Increased human-wildlife conflict 5. Uncontrolled abstraction 6. Uncontrolled development 7. Urbanization 8. Population pressure 9. Land fragmentation 10. Destruction of wetlands 11. Industrial pollution 12. Production of environment unfriendly goods like plastics 13. Poor solid waste management 14. Lack of storm water management at all levels 15. Terrorism

3.4 Stakeholder Analysis

NCWSC has many stakeholders in its core functions some of whom are identified in Table 4.

Table 4: Key stakeholders of NCWSC

	Stakeholder	NCWSC's Expectations	Stakeholder's Expectations
1.	Employees	High productivity and commitment	1. Sound terms and conditions of service 2. Prompt payment of emoluments 3. Timely communication 4. Good working conditions 5. Fair treatment
2.	Customers	Customer loyalty prompt payment	1. Quality Service 2. Timely communication
3.	Union	Sound industrial relations	1. Recognition and enhancement of members welfare 2. Prompt remittance of emoluments
4.	Board of Directors	Sound leadership and good policy	High performance and Good Governance
5.	Shareholders (Nairobi City County Government)	Support and autonomy	1. Prompt payment of lease fees 2. Improved service delivery
6.	Government and its Agencies (WARMA, NEMA, AWSB, WASREB)	Enabling policies and legislation and support	Service delivery and compliance
7.	Suppliers	1. Quality goods, services and works 2. Timely delivery and after sale service	1. Prompt payment 2. Fair treatment
8.	Development Partners	1. Favourable terms and conditions 2. Timely disbursement of funds	1. Good governance 2. Effective utilization of funds
9.	Community (WRUA, WAGs, CBOs, KARA, COFEK, (Muungano wa Wanavijiji)	Support and Cooperation	1. Corporate Social Responsibility 2. Efficient Service Delivery
10.	Media	Factual and Fair coverage	Information disclosure
11.	Water and Sewerage vendors	1. Compliance with licensing terms 2. Prompt payment	1. Cooperation 2. Timely communication 3. Service delivery
12.	Neighbouring County Governments	Support and Understanding	Corporate Social Responsibility
13.	Water Service Providers (WSPs)	Timely payment of bulk water supplied	Supply adequate bulk water
14.	Sector Associations (WASPA, AfWA, IWA etc.)	Good sector stewardship and accountability	Active participation Cooperation



CHAPTER FOUR

Strategic Analysis

Company's employee in
Ngethu lab

4.0 Strategic Analysis

4.1 Strategic Themes

Strategic themes are the key performance areas in which an organization must excel in to achieve its mission and vision, and deliver value to stakeholders. They are the organization's pillars of excellence. The following were identified as the broad areas of focus for the planning period:

- i. Enhanced and sustainable quality water sources, production and storage
- ii. Optimized transmission and equitable distribution of quality water
- iii. Reduction of Non Revenue Water
- iv. Wastewater management
- v. Revenue growth and customer loyalty
- vi. Financial stewardship
- vii. Human resource management
- viii. Brand equity and institutional strengthening

4.1.1 Enhanced and Sustainable Quality Water Sources, Production and Storage

The existing water resources are only able to meet 75% of the demand. To be able to meet the demand for water, NCWSC intends to take measures aimed at increasing water production. In the processes of producing water, the company plans to ensure conservation of the catchment areas.

4.1.2 Optimized Transmission and Equitable Distribution of Quality Water

The current process of water transmission and distribution is faced with many challenges ranging from dilapidated infrastructure to operational inefficiencies. This has resulted into high non-revenue water levels. The company plans to put measures in place that will ensure increased water coverage while ensuring efficiency in the distribution process.

4.1.3 Reduction of Non Revenue Water

Due to the status of existing infrastructure and low investments, the company has experienced high levels of NRW compared to accepted benchmark. In the planning period therefore, the company intends to invest heavily in areas that will lead to reduction of both commercial and technical water losses.

4.1.4 Wastewater management

In the process of providing sewerage services, NCWSC has encountered challenges ranging from inadequate infrastructure to inefficiencies in operations. To deal with the challenges, the company has come up with strategies aimed at reaching more customers while at the same time enhancing efficiency in operations.

4.1.5 Revenue Growth and Customer Loyalty

NCWSC has not exhausted all its potential customers in provision of water and sewerage services. In addition, the company has not been efficient in billing and collection of revenue. The company plans to pursue strategies aimed at increasing customer base, and enhancing its water and sewerage billing and collection efficiency. Further, the company plans to focus on excellent customer service delivery as a way of enhancing the performance of the company and meeting customer needs.

4.1.6 Financial Stewardship

The Company has identified the need to put in place appropriate measures aimed at improving efficiency and effectiveness in service delivery. This will aid the Company in ensuring financial resources are availed and costs associated with operations maintained at optimal levels. As a way of improving on efficiency and effectiveness, the company plans to increase the level of automation in its operations. Further, NCWSC endeavours to adhere to the regulatory provisions and best practices while carrying out its operations. This will enable the Company provide uninterrupted services to its customers.

4.1.7 Human Resource Management

For NCWSC to achieve its objectives, the Company intends to adopt best practices in human resource management. The company plans to put in place an appropriate organization structure with optimal human resources. The staff will need to be equipped with the necessary skills and facilities to increase productivity.

4.1.8 Brand Equity and Institutional Strengthening

NCWSC has identified brand equity as one of the aspects the Company needs to enhance as a way of strengthening the institution. The Company therefore intends to pursue strategies that will enhance its visibility and collaborations with various partners.

4.2 Strategic Objectives and Strategies

Strategic objectives specify what an organization expects to fulfil within a given time period. They are specific statements that address intended changes, improvements and challenges to be addressed within a given period of time. Strategy, on the other hand, is an initiative that enables an organization achieves results. Arising from the strategic themes, the following strategic objectives and strategies were extracted:

Table 5: Summary of objectives and their respective strategies

Theme	Objectives	Strategies
1. Enhanced and sustainable quality water sources, production and storage	1. To enhance the water sources capacity to meet 2019 demand of 782,000m ³ /day by 2018/19	<ul style="list-style-type: none"> i. Conservation of catchment areas ii. Expand raw water transmission lines iii. Expand the treatment plant iv. Enhance raw water storage capacity v. Adapt new water treatment technologies vi. Regulation of river abstraction flows
	2. To ensure 100% compliance to NCWSC water quality standard as adopted from WHO and KEBS	<ul style="list-style-type: none"> i. Enhanced process and quality control ii. Implementation of water safety plans (WSP) and Food Safety Management System (FSMS) iii. Implement water quality standards iv. Enhance water quality monitoring v. Automation of operations
2. Optimized transmission and equitable distribution of quality water	To sustainably transmit and distribute 770,000m ³ /day by June 2019	<ul style="list-style-type: none"> i. Expand the capacity of the transmission pipelines ii. Rehabilitate, upgrade and extend the existing distribution network
3. Reduction of Non Revenue Water	To reduce Non Revenue Water from 40% to 16% by June 2019	<ul style="list-style-type: none"> i. Active leak detection ii. Pressure management iii. Asset management iv. Quantify the water distributed into the zones v. Improve meter accuracy vi. Develop authentic customer data base.
4. Wastewater management	To efficiently collect, convey, treat and dispose off 400,000m ³ per day of wastewater in an environmentally friendly manner by 2018/19.	<ul style="list-style-type: none"> i. Preventive maintenance of sewerage infrastructure ii. Wastewater quality and abuse monitoring iii. Education and advocacy campaigns iv. Expansion and rehabilitation of existing network and treatment plants v. Reuse of backwash and final effluent vi. Compliance to regulatory requirement on wastewater vii. Implement PPP (Polluter Pay Principle) viii. Embrace appropriate technology ix. Explore possibilities of accessing Carbon Credits x. Wastewater recycling
5. Revenue growth and customer loyalty	1. To grow the sales volume from 60% to 84% of the production by June 2019.	<ul style="list-style-type: none"> i. Generate timely and accurate bills ii. Grow the number of High Consumers accounts iii. Implement and continuously review meter management policy iv. Implement the token based pre-paid meters in the informal settlements
	2. To increase the customer base from 280,000 to 400,000 by June 2019	<ul style="list-style-type: none"> i. Develop business marketing/ development units ii. Implementation of social connection policy in the informal settlements iii. Review and adopt effective contracting processes to the last mile
	3. To increase customer satisfaction level from 69% to 90% by June 2019	<ul style="list-style-type: none"> i. Provide quality and reliable customer service ii. Enhance stakeholder engagement iii. Implementation of Quality Management System (QMS) requirements

Theme	Objectives	Strategies
6. Financial stewardship	1. Increase revenue collection from 94% to 98% by 2018/19	<ul style="list-style-type: none"> i. Increased accurate and timely billing ii. Increase alternate channels for revenue collection iii. Fully operationalize the zoning concept iv. Use modern technology in disconnection
	2. Increase the current revenue base by 68% (from kshs.6 billion to Kshs. 10.08 billion) by 2018/19	<ul style="list-style-type: none"> i. Undertake review of water prices ii. Diversify revenue sources
	3. Reduce accounts receivables of KShs. 9 billion to not more than 4.5 billion by 2018/19	Review and comply with debt management policy
	4. Reduce the level of accounts payables from KShs. 3.9 billion to KShs. 1.3 billion by 2018/19	Review and comply with financial management policy
	5. Secure external funding of up to Kshs 20 billion by 2018/19.	<ul style="list-style-type: none"> i. Sourcing for external financial resources ii. Engage private sector in development and management of water and sewerage infrastructure
	6. To ensure 100% automation and integration of all business processes by June 2019.	<ul style="list-style-type: none"> i. Improve budgetary control through enhanced financial systems. ii. Improve automation level from 55% to 100%
	7. To ensure 100% safety and optimal utilization of company resources.	<ul style="list-style-type: none"> i. Strengthen internal controls ii. Ensure business systems continuity iii. Provision of onsite security iv. Obtaining insurance cover for assets v. Enhance implementation of fleet management system
7. Human resource management	1. Improve staff productivity level from 65% to 90% by June 2019	<ul style="list-style-type: none"> i. Undertake a review and alignment of the organogram ii. Carry out staff rationalization iii. Undertake manpower planning iv. Undertake succession planning v. Implement change management vi. Implement performance based remuneration
	2. Improve employees' satisfaction level from 68% to 80% by June 2019	<ul style="list-style-type: none"> i. Undertake staff training and development ii. Improve work environment
8. Brand equity and institutional strengthening	1. To have a Nairobi City Water Tower in place by June 2019	Enter in public private partnerships
	2. Improve the level of brand equity from 35% to 100% by 2018/19	<ul style="list-style-type: none"> i. Harmonise brand equity within the company ii. Enhance positive public image
	3. Strengthen Company's partnership with stakeholders at national, regional and international levels	<ul style="list-style-type: none"> i. Seek membership in relevant Associations ii. Participation in relevant congresses, conferences, workshops and seminars

Diagrammatic view of NCWSC's water sources and production capacities

Located in Njambini, Nyandarua.
 * First stage completed in 1955 and Second in 1968.
 Dam on Sasumua River but receives Kiburu and Chania waters.
 Storage capacity is 15.9million m³.
 Pipeline to Kabete 60km.
 * Design yield 59,000m³/day
 *Current yield 59,553m³/day

Sasumua

* Located in Githunguri, Kiambu. Completed in 1950.
 * Dam on Ruiru River.
 Storage capacity is 2.90million m³.
 * Stores raw water with yield of 21,600 m³/day.
 Current yield is 19,343 m³/day.
 * Pipeline to Kabete 25km

Ruiru

Thika Dam

Located in Ndakaini (Thika District)
 Completed in 1994
 Storage Capacity - 70 million m³
 * Linked to Chania River by 4km tunnel which serves Ngethu

Ngethu

Located in Gatundu North.
 * Ng'ethu Phase 1 -commissioned in 1974, nominal design output 61,000m³/day
 *Ng'ethu Phase II -Commissioned in 1984, nominal design output 157,000m³/day
 *Ng'ethu Phase III -Commissioned in 1997 nominal design output of 222,000m³/day
 * Ng'ethu Treatment plant is designed to produce a rated nominal output of 440,000m³/day of potable water(Production).
 Thika dam design capacity 70 million m³

Kikuyu springs

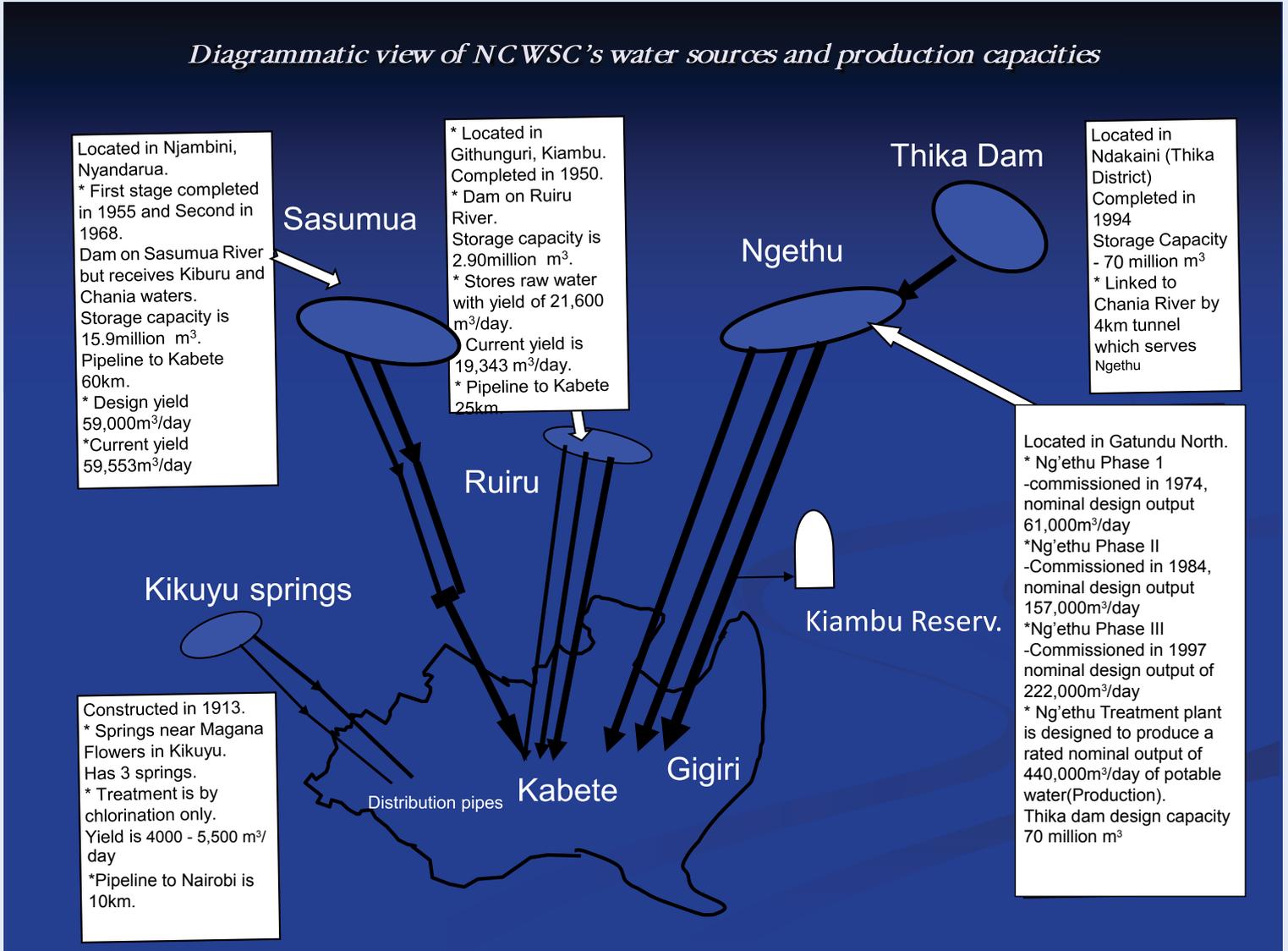
Constructed in 1913.
 * Springs near Magana Flowers in Kikuyu.
 Has 3 springs.
 * Treatment is by chlorination only.
 Yield is 4000 - 5,500 m³/day
 *Pipeline to Nairobi is 10km.

Kiambu Reserv.

Distribution pipes

Kabete

Gigiri





CHAPTER FIVE

Implementation Plan

Ngethu clarifiers

5.0 Implementation Plan

Table 6: Detailed Implementation Matrix

THEME 1: ENHANCED AND SUSTAINABLE QUALITY WATER SOURCES, PRODUCTION AND STORAGE

Objective 1: To enhance the water source capacity to meet 2019 demand of 782,000m³/day by 2018/19

S. NO.	Strategy	Expected Output(s)	Proposed Action(s)	Output Indicator(s)	Implementing actors	Time Frame	Cost estimates (Kshs million)
1	Conservation of the catchment areas	Improved base flows	<ul style="list-style-type: none"> i. Afforestation ii. Slope stabilization iii. Lobbying with WRUAS, WARMA, KFS, CFA, local Admin iv. Continued supporting the upper Tana water Fund conservation activities. v. Security surveillance vi. Fencing vii. Establishment of boundaries/ survey (Kikuyu springs, Dams riparian and wayleaves) viii. Enhanced water quality monitoring ix. Research study on factors impacting on raw water quality at Ruiru dam. 	<ul style="list-style-type: none"> No. of trees planted Size of Area stabilised No. of meetings No. of conservation projects funded. Reduced incidences of encroachment Fencing of company installations No of Land registration title. No. of samples Research study report. 	<ul style="list-style-type: none"> TD/ECM/PM TD/ECM/PM TD/ECM/PM TD/ECM/PM TD/SM/PM TD/EM/PM TD/EM/PM QAM/PM TD/QAM/R&D/PM 	<ul style="list-style-type: none"> Continuous Continuous Continuous Continuous Continuous June 2019 Continuous Continuous June 2016 	<ul style="list-style-type: none"> 50 25 5 50 20 200 250 100 2.5

S. NO.	Strategy	Expected Output(s)	Proposed Action(s)	Output Indicator(s)	Implementing actors	Time Frame	Cost estimates (Kshs million)
2	Expand raw water transmission lines	Increased raw water flows	i. Construct a raw water transmission (DN 900) from Mataara to Ngethu	Length laid	TD/EM	June 2018	500
			ii. Install measuring devices for raw water at the plants (Sasumua, Ngethu & Kikuyu)	No of devices installed	TD/NRM/PM	June 2016	10
3	Expand the treatment plant	Increased treated water volume	i. Construction 2No. clarifiers and 5No. filters with a total output of 110,000m ³ /day	No. of clarifiers and filters constructed	TD/EM/PM	June 2018	850
			ii. Install measuring devices for treated water at the plants (Sasumua, Ngethu & Kabete)	No of devices installed	TD/NRM/PM	June 2016	10
4	Enhance raw water storage capacity	Increased water quantity	i. Undertake feasibility studies	Identify sites for dam construction	TD	June 2016	30
			ii. Acquire the land in the identified sites	Land acquired	TD	Jan 2017	500
			iii. Undertake detailed design of the dams	Designs available	TD	June 2017	50
			iv. Undertake construction of the dams	Dams constructed	TD	June 2019	3000
5	Adapt new water treatment technologies	Improved treated water quality	i. Adopt alternative coagulant	Report on type of coagulant adopted	TD/QAM/PM/RDM	December 2015	10
			ii. Production of chlorine on-site (Particularly Sasumua, Kabete and Kikuyu)	On-site chlorine system installed and commissioned	TD/QAM/PM/RDM	December 2015	30
			iii. Install treatment unit at Kikuyu springs	Treatment unit installed and commissioned	TD/QAM/EM/PM	June 2017	50

S. NO.	Strategy	Expected Output(s)	Proposed Action(s)	Output Indicator(s)	Implementing actors	Time Frame	Cost estimates (Kshs million)
6	Regulation of river abstraction flows	Increased yield	<ul style="list-style-type: none"> i. Lobby WRMA for control of unauthorized abstraction i. Increased surveillance ii. Install river gauges iii. Install measuring devices at the intakes (Sasumua, Ruiru, Kikuyu, Thika dam) 	<ul style="list-style-type: none"> Minutes of meetings and correspondence Surveillance reports No. of gauges installed No of measuring installed 	<ul style="list-style-type: none"> TD/PM TD/SM/PM TD/PM TD/NRM/PM 	<ul style="list-style-type: none"> Continuous Continuous June 2016 June 2016 	<ul style="list-style-type: none"> 0.5 0 10 10

Objective 2: To ensure 100% compliance to NCWSC water quality standard as adopted from WHO and KEBS.

S.NO.	Strategy	Expected Output(s)	Proposed Action(s)	Output Indicator(s)	Implementing actors	Time Frame	Cost estimates (Kshs million)
1	Enhanced process and quality control	Improved Quality	<ul style="list-style-type: none"> i. Install integrated on-line monitoring devices at the plants (Ngethu, Sasumua, Kabete & Kikuyu) ii. Implementation of ISO 17025 iii. Specification testing for water treatment chemicals and filter media 	<ul style="list-style-type: none"> No of installed on-line monitoring devices Certification 100% percentage compliance 	<ul style="list-style-type: none"> TD/QAM/PM/O&M/ICTD ISO/HRM/QAM/ PM TD/QAM/PM 	<ul style="list-style-type: none"> June 2017 June 2017 Continuous 	<ul style="list-style-type: none"> 300 20 20
2.	Implementation of WSP and FSMS	Improved water quality	<ul style="list-style-type: none"> i. Create awareness on WSP FSMS i. Implementation of improvement plans under WSP 	<ul style="list-style-type: none"> Minutes of awareness campaign No. of implementation reports 	<ul style="list-style-type: none"> ISO/QAM/PM PM/QAM 	<ul style="list-style-type: none"> Continuous Continuous 	<ul style="list-style-type: none"> 20 40

S.NO.	Strategy	Expected Output(s)	Proposed Action(s)	Output Indicator(s)	Implementing actors	Time Frame	Cost estimates (Kshs million)
1	Enhanced process and quality control	Improved Quality	<ul style="list-style-type: none"> i. Install integrated on-line monitoring devices at the plants (Ngethu, Sasumua, Kabete & Kikuyu) ii. Implementation of ISO 17025 	<ul style="list-style-type: none"> No of installed on-line monitoring devices Certification 	<ul style="list-style-type: none"> TD/QAM/PM/O&M/ICTD ISO/HRM/QAM/ PM 	<ul style="list-style-type: none"> June 2017 June 2017 	<ul style="list-style-type: none"> 300 20
3.	Implement water quality standards	Improved water quality	<ul style="list-style-type: none"> i. Training on ISO 17025 ii. Implementation of ISO 17025 	<ul style="list-style-type: none"> No. of staff trained Pre-certification assessment reports 	<ul style="list-style-type: none"> HRM/QAM/ISO QAM/ISO 	<ul style="list-style-type: none"> June 2015 December 2015 	
4.	Enhance water quality monitoring	Improved water quality	<ul style="list-style-type: none"> i. Install on-line monitoring devices at Gigiri ii. Installation of LIMS at the Kabete Central Laboratory. iii. Installation of new equipment at the Central Laboratory (GC, Polymer analyser, on-line heavy metal analyser) 	<ul style="list-style-type: none"> No. of devices installed A live LIMS in place No. of equipment installed 	<ul style="list-style-type: none"> TD/QAM/O&M/SCM ICTD/QAM/SCM QAM/SCM 	<ul style="list-style-type: none"> June 2017 June 2015 June 2015 	<ul style="list-style-type: none"> 60 120 100
5.	Automation of operations	Increased efficiency	<ul style="list-style-type: none"> i. Installation of turbidimeter at Mataara outlet ii. Automation of chemical dosing equipment iii. Automation of reservoir levels gauges iv. Automation of flow measurements in the treatment plant (raw and treated) v. Automation of dam level measurement 	<ul style="list-style-type: none"> No. of operations automated No. of system automated No. of reservoir automated No. of measuring devices automated A live LIMS in place 	<ul style="list-style-type: none"> TD/QAM/PM TD/QAM/PM TD/NRM/PM TD/NRM/PM TD/PM/NRM 	<ul style="list-style-type: none"> June 2015 December 2016 December 2016 December 2015 December 2016 	<ul style="list-style-type: none"> 5 20 5 5 10

THEME 2: OPTIMIZED TRANSMISSION AND EQUITABLE DISTRIBUTION OF QUALITY WATER

Objective: To sustainably transmit and distribute 770,000m³/day by June 2019

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actors	Time frame	Cost estimates (Kshs million)
1.	Expand the capacity of the transmission pipelines	Transmission of 770,000 m ³ /d	i. Laying DN 900, 20 KM transmission pipeline.	KM laid	TD, EM	June 2019	
			ii. Swabbing all transmission pipelines, maintenance of pumps and appurtenances.	Increased volumes and improved water quality	TD, O&MM	June 2019	175
			iii. Clean 16 water reservoirs	Reservoirs cleaned	TD, O&MM	Annually	56
2.	Rehabilitate, upgrade and extend the existing distribution network	Incremental water coverage and reduction of physical water losses	i. Laying of 368KM of water networks as per annex 1	KM of pipeline extended and terminal reservoir	TD, EM	June 2019	3,200
			ii. 300 km water network extension in informal settlements as per Annex 2	KM of pipelines laid	TD, ISM	June 2019	500
			iii. Construct 50 no. water kiosks in informal settlements	No. constructed	TD, ISM	June 2019	30
			iv. Undertake 20,000 household/plot connections (at least 50% prepaid meters) in informal settlements	No. of water meters installed	TD, ISM, RMs	June 2019	100

THEME 3: REDUCTION OF NON REVENUE WATER

Objective: To reduce Non Revenue Water from 40% to 16% by June 2019.

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actors	Time frame	Cost estimates (Kshs million)
1.	Active leak detection	Reduction of NRW (physical) 22% to 17%	<ul style="list-style-type: none"> i. Carry out leak scouting for physical leaks identification and documentation ii. Carry out pilot studies in, Loresho, Plot 10, Ruai and CBD iii. Repair all reported and visible leaks within stipulated response times iv. Review and implement work procedures and instruction for new connections and leak repairs 	<ul style="list-style-type: none"> Documented leaks Study reports Leak repair reports Documented work procedures and instruction 	<ul style="list-style-type: none"> TD, NRWM TD, NRWM TD, O&MM NRWM O&MM NRWM 	<ul style="list-style-type: none"> continuous December 2015 Continuous June 2014 	<ul style="list-style-type: none"> 2 25 750 0
2.	Pressure management	Reduction in leakages	<ul style="list-style-type: none"> i. Evaluate performance of existing pressure zones ii. Conduct network pressure survey to inform active leakage detection and implement the findings 	<ul style="list-style-type: none"> Evaluation report Pressure survey reports 	<ul style="list-style-type: none"> NRWM, O&MM NRWM, O&MM 	<ul style="list-style-type: none"> June 2019 June 2019 	<ul style="list-style-type: none"> 57 203
3.	Asset management	Reduction of water losses	<ul style="list-style-type: none"> i. Procure and operationalize GIS and employ qualified staff ii. Develop Asset Management Policy, Systems and Plans iii. Procure Asset Management System iv. Conduct asset valuation 	<ul style="list-style-type: none"> Operational GIS Asset management policy Asset Management System Valuation report 	<ul style="list-style-type: none"> TD, NRWM TD, EM, NRWM TD, EM, NRWM TD, EM, NRWM 	<ul style="list-style-type: none"> December 2015 December 2015 December 2015 December 2019 	<ul style="list-style-type: none"> 21 4 106 250
4.	Quantify the water distributed into the zones	Incremental sales growth	<ul style="list-style-type: none"> i. Installation of District Meters 	<ul style="list-style-type: none"> No. of District meters installed 	<ul style="list-style-type: none"> CD, TD, NRW-M 	<ul style="list-style-type: none"> June 2015 	<ul style="list-style-type: none"> 157

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actors	Time frame	Cost estimates (Kshs million)
5.	Improve meter accuracy	Incremental sales growth	i. Meter right sizing	No. of meters right sized.	CD, NRW-M	June 2019	12
			ii. Replace all faulty meters	No. of meters replaced	CD, RMs	Continuous	840
			iii. Meter testing and calibration	No. of meters tested & Calibrated	CD, NRW-M,	Continuous	3
			iv. Secure New connection materials	Materials available	CD, SCM	continuous	100
			v. Replace all meters 10 years and older	No. of meters replaced	CD, RMs	Continuous	300
			vi. Install AMRs for large consumers	AMRs installed	CD, NRW	continuous	130
			vii. Seal all customer meters	No. of meters sealed	CD, RMs	Continuous	20
			viii. Install 4,000 Prepaid meters in Informal settlements	No of meters installed	TD	continuous	60
			ix. Install additional MT Benches	No. of MT benches installed	CD, NRW-M	Dec-16	20
			x. Install meter repair bench and commence meter repairs	Installed repair bench	CD, NRW-M	Dec-15	8
			xi. Training and bench marking for NRW reduction staff	No. of staff trained	CD, DHRA, NRW-M	Continuous	47
6.	Develop authentic customer data base	Incremental sales growth	i. Develop acceptable data gathering procedures and processes for adoption	Available Procedures	CD, RMs, ICT-D	December 2014	0
			ii. Data clean up	No. of cleaned customer records	CD, RMs, TD	Continuous	100

THEME 4: WASTEWATER MANAGEMENT**Objective:** To efficiently collect, convey, treat and dispose off 400,000m³ per day of wastewater in an environmentally friendly manner by 2018/19

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actors	Time frame	Cost estimates (Kshs million)
1.	Preventive maintenance of sewerage infrastructure	Enhanced system capacity utilization Reduced sewer overflows Retained capacity Controlled quality of industrial and trade facilities discharges	<ul style="list-style-type: none"> i. Review and implement existing preventive maintenance plans ii. Enhanced surveillance to deter intentional blockages/illegal sewer connections iii. License and monitor private exhausters iv. License and monitor effluents from industries and trade facilities v. Prepare and implement a FOG programme vi. Review and operationalize a procedure for new sewer connection vii. Implement Asset management of sewerage infrastructure viii. Procure additional four flushing units, four exhausters, six excavators, one crawlers, six trucks, working tools, PPEs, ix. Maintain safety stock levels of maintenance materials and spares x. Review and operate in accordance with the operations manuals xi. Mapping of sewer overflow prone areas xii. Lobby with the County Govt to secure the sewer wayleaves and land designated for sewage treatment plants 	<ul style="list-style-type: none"> A preventive manual/schedule in place and adhered to Kms surveyed No. licensed No. licensed FOG programme in place Procedure operationalized Plan in place and operationalized Additional no. in place Materials and spares returns Operationalized manuals Sewer overflow map Minutes of meetings 	TD, E&CM, RMs	Jan 2015	1,200
					TD, E&CM, RMs /SM	Jan 2015 and continuous	50
					TD, E&CM	July 2014 and Continuous	25
					TD, E&CM	July 2014 and Continuous	25
					TD, E&CM, RMs	January 2015	25
					TD, E&CM, RMs, EM	June 2015	5
					TD, E&CM, EM	June 2016	100
					TD, E&CM, O&M, SCM	June 2019	510
					TD, E&CM, SCM	July 2015 and Continuous	1,000
					TD, E&CM, RMs	June 2015	
					TD, E&CM, RMs, EM	June 2016	1
					TD, E&CM, EM	June 2016	10

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actors	Time frame	Cost estimates (Kshs million)
2.	Wastewater quality and abuse monitoring	Enhanced process and quality control	i. Develop and implement polluter pay principle (PPP)	Approved and operationalized 3P policy	TD, E&CM,	July 2017	50
			ii. Monitor the waste quality throughout the treatment and disposal processes inclusive of the river discharge points.	Analysis reports	TD, QAM	July 2014 and continuous	30
			iii. Rehabilitate, equip and accredit the wastewater laboratories	Accredited waste-water Laboratories	TD, QAM, EM, ISO-M	June 2016	50
3.	Education and advocacy campaigns	Minimized misuse of sewerage system	i. Prepare education materials/ brochures	Materials prepared	TD/CD	Dec 2014	8
			ii. Hold sensitization forums	No. of forums held	TD/CD	Continuous	12

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actors	Time frame	Cost estimates (Kshs million)
4.	Expansion and rehabilitation of existing network	Increased sewer coverage both in terms of area and population Increased capacity of Sewage Treatment Plants	i. Develop and implement a sewer revolving fund	Revolving fund in place	TD, E&CM, EM,	June 2017	250
			ii. Duplication of Njiru-Ruai trunk mains	KM laid	TD, EM	June 2018	500
			iii. Design and construct Sewer reticulations in Zimmerman, Kasarani, Mwiki, Kawangware, Riruta, Dagoreti, kahawa west, Embakasi, upperhill	KM laid	TD, EM	June 2019	6,800
			iv. Construction of various truck sewers (Embakasi, Ruai, Mihango, Kamiti North, Kamiti South, Soweto, Matundu, Gitathuru, Upper Parklands	Trunk sewers in place	TD, EM	June 2019	1,595
			v. Rehabilitation of Kariobangi Sewerage Plant	Plant rehabilitated	TD, EM	Jun-19	200
			vi. Rehabilitation and expansion of DESTW	Plant rehabilitated	TD, EM	June 2019	2,500
			vii. Rehabilitation and expansion of Karen Ponds	Plant rehabilitated	TD, EM	June 2019	100
			viii. Rehabilitation of Mathare Trunk sewer	KM laid	TD, EM	June 2019	
			ix. Develop policy for Private-Public Partnerships in sewer expansion	Policy in place	TD, EM	June 2015	2.5
			x. Review and implement procedure for Privately Developed Sewers (PDS)	operationalized Procedure	TD, EM	June 2015	1
			xi. Implement the following in informal settlements:				
			<ul style="list-style-type: none"> • 50KM sewer extension • 50 ablution blocks • 2,000 sewer connections • 400 standalone toilets 	KM laid No. built No. installed No. built	TD, EM TD, EM TD, EM TD, EM	June 2019 June 2019 June 2019 June 2019	1,500 150 44 240

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actors	Time frame	Cost estimates (Kshs million)	
5.	Reuse of backwash and final effluent	Reduced production losses Meet compliance requirements	i. Construct backwash reuse system inclusive of caking and disposal of the sludge at the three water treatment plants	Quantity and quality of water re-circulated Tonnage of sludge disposed	TD, QAM, EM, PM	June 2019	200	
6.	Compliance to regulatory requirement on wastewater	System operate at optimum capacity Operations comply to regulatory standards	i. Implementation of EMS	EMS Certification	TD, ISO, ECM,	June 2017	20	
			ii. Annual environmental audit programmes	Annual EMPs	TD, ECM	July 2014 and cont.	25	
			iii. EIA/EA on new projects and EIA NEMA Reports	No. of EIA Licenses				
			iv. Develop and implement environmental quality	No of reports reviewed Approved policy		Dec. 2014	25	
7.	Implement Polluter Pay Principle (PPP)	Improved quality of influent	Review the PPP policy Execute the PPP policy	Updated policy Policy operational	TD/FD TD/FD	Dec 2014 Continuous		
8.	Embrace appropriate technology	Operations efficiency	Identify, document and prioritise areas of automation in wastewater operations	Recommended Automation areas	TD, ECM, ICTD, QAM	June 2016	8	
9.	Explore possibilities of accessing Carbon Credits	Operations efficiency	Energy generation – Methane production in the treatment plant	Megawatts of energy produced	TD, ECM, O&M	June 2019	50	
10	Waste water recycling	Alternative ways of using treated wastewater	Carry out feasibility study	Feasibility Study Report	TD/R&D	June 2017	10	

THEME 5: REVENUE GROWTH AND CUSTOMER LOYALTY

Objective 1: To grow the sales volume from 60% to 84% of the production by June 2019.

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
1.	Generate timely and accurate bills	Incremental sales growth	<ul style="list-style-type: none"> i. Install 20,000 No. AMRs for HC accounts ii. Use mobile technology to transmit meter readings iii. Use of GIS to map all meters iv. Acquisition of a robust billing system. v. Introduction of e-billing 	<ul style="list-style-type: none"> No. of AMR meters installed An operational software No. of meters mapped to GIS Operational Billing system No. of e-bills 	CD, ICT-D, TD CD, ICT-D RM, Eng. M, ICT-D CD, ICT-D CD, ICT-D	By June 2019 By December 2014 By December 2014 By December 2014 By December 2014	1,000 20 20 400 30
2.	Grow the number of High Consumers accounts	Incremental sales growth	Identify potential HCs	<ul style="list-style-type: none"> A minimum of 20,000 HCs Increased No. of new HCs 	RM, CBM	By June 2019	0
3.	Implement and continuously review meter management policy	Incremental sales growth	<ul style="list-style-type: none"> i. Create a standing committee to monitor the implementation and effectiveness of the policy ii. Training of artisans iii. Replace all meters older than 10 years. 	<ul style="list-style-type: none"> A working committee No. of artisans trained No. of meters changed. 	CD DHRA, CD, TD RM, CD	By June 2014 By June 2014 By June 2019	2 5 300
4.	Implement the token based pre-paid meters in the informal settlements	Incremental sales growth	<ul style="list-style-type: none"> i. Install token based pre-paid meters 	<ul style="list-style-type: none"> No. of pre-paid meters installed in informal settlements 	RM, CD	By June 2019	150

Objective 2: To increase the customer base from 280,000 to 400,000 by June 2019

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
1.	Develop business marketing/ development units	Incremental sales growth	<ul style="list-style-type: none"> i. Develop business development/ marketing concept paper for management approval ii. Implement the approved concept 	Approved concept	CD, DHRA	By June 2014	2
2.	Implementation of social connection policy in the informal settlements	Incremental sales growth	<ul style="list-style-type: none"> i. Identify areas suited for social connection policy 	No. of connections under the policy	CD	By December 2014	20
3.	Review and adopt effective contracting processes (Ensure connection to the last mile)	Incremental sales growth	<ul style="list-style-type: none"> i. Carry out, adopt and implement the reviewed process 	Adopted contracting procedures	RM, IS-M, CD, TD	Continuous	50
					CD, TD	By June 2014	5

Objective 3: To increase customer satisfaction level from 69% to 90% by June 2019

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
1.	Provide quality and reliable customer service	Incremental sales growth	<ul style="list-style-type: none"> i. To continuously review and adhere to the customer service charter ii. Customer / mobile clinics iii. Annual stakeholder workshop iv. Conduct customer perception survey with appropriate sample sizes and address the gaps v. Leveraging communications with ICT. (Bulk SMSs, Call Centre, Maji Voice vi. Develop competencies of customer care teams vii. Devolve customer care services to zonal areas 	<ul style="list-style-type: none"> % compliance level No. of customer care clinics Workshop report Perception survey report Customer feedback No. of trained customer care staff No. of operational zonal customer care centres 	<ul style="list-style-type: none"> CD CD, RM CD CD CD CD, DHRA CD, RM, DHRA 	<ul style="list-style-type: none"> Continuous Continuous Annual Annual Continuous December 2014 December 2014 	<ul style="list-style-type: none"> 15 50 15 40 50 5 50

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
2.	Enhance stakeholder engagement	Effective communication with stakeholders	i. Capture customer telephone numbers	No. of telephone no. captured	CD, RM	Continuous	5
			ii. Review and implement Communication Policy (CP)	Approved communication policy	CAM	July .2014	1
			iii. Sensitization of staff on Communication Policy and standards	No of staff sensitized	CAM,	Continuous	50
			iv. Review and implement Corporate Social Responsibility Policy (CSR)	Approved CSR Policy CSR Programs in place	CAM	Dec. 2014	10
			v. Water Demand Management	No. of awareness campaigns	CAM	Annually	30
			vi. Media Out reach	Media briefing minutes	CAM	Quarterly	20
			vii. External/ International engagement	Registrations/ presentations during fora, Membership receipts. Support from associations	CAM	Annually	10
3.	Implementation of Quality Management System (QMS) requirements	Enhanced customer satisfaction index	i. Training and developing competences of internal quality auditors	Internal quality auditors trained	MR	Continuous	40
			ii. Carrying out regular internal and external quality audits	Audit reports	MR	Continuous	20
			iii. Holding regular management reviews	Minutes of review meetings	MR	Continuous	5

THEME 6: FINANCIAL STEWARDSHIP

Objective 1: Increase revenue collection from 94% to 98% by 2018/19

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
1.	Increased accurate and timely billing	High meter reading efficiency	i. Submit actual meter reading	Meter reading efficiency	CD/ICTD	Continuous	0
		High billing efficiency	ii. Generate and dispatch bills for all accounts	Billing efficiency			
2.	Increase alternative channels for revenue collection	Increased revenue collected	i. Opening new pay points	Number of pay points created	FD	2 collection points per year	13
			ii. Engage additional agencies				
3.	Fully operationalize the zoning concept (offices for each zone)	Offices for all zonal officers	i. Establish offices within the zones	Number of zones with offices	DHRA	By 2015/2016	12
4.	Use modern technology in disconnection	Increased revenue	i. Benchmark to identify appropriate modern technology	Technology adopted	FD/ICTD	By 2016/2017	5
			ii. Procure and implement identified technology				75

Objective 2: Increase current Revenue Base by 68% (from KShs. 6 billion to 10.08 billion) by 2018/2019

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
1	Undertake review of water prices	Increased revenue	i. Review tariff ii. Implement reviewed tariff	New tariff applied	FD/CD	2014/2015	10
2	Diversify revenue sources	Increased revenue	i. Research on viability ii. Implement identified project	Number of projects implemented	ICTD/TD	2018/2019	50

Objective 3: Reduce accounts receivables of KShs. 9 billion to not more than 4.5 billion by 2018/2019

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
1.	Review and comply with debt management policy	Reduced debt	i. Debt authentication ii. Adjustment of erroneous bills iii. Write off of debts	The debt level	FD	Continuous	5 5 10

Objective 4: Reduce the level of accounts payables from KShs. 3.9 billion to KShs. 1.3 billion by 2018/19

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
1.	Review and comply with credit management policy	Financial Sustainability	i. Allocate funds to settle overdue payables ii. Adhere to payment provisions in contracts	The credit level	FD	Continuous	4,000 0

Objective 5: Secure external funding of up to Kshs 20 billion by 2018/19

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
1.	Sourcing for external financial resources	Funded projects	i. Setting of department	Funds accessed Projects funded	FD	By 2015/2016	20
			ii. Developing a funding framework				6
			iii. Implementing framework				2
2.	Engage private sector in development and management of water and sewerage infrastructure	Funded projects	i. Develop a policy on public private partnerships	Policy in place	FD	2018/2019	4
			ii. Engage private partners				Number of engaged partners Number of Projects implemented

Objective 6: Ensure 100% automation and integration of all business processes by June 2019

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
1.	Improve budgetary control	Operational efficiency	i. Exploring outsourcing non-core services	Number of services outsourced Optimal level of overhead costs	FD	2017/2018	2
			ii. Enhancing budgetary control system through integration				100

S.NO.	Strategy	Expected Output	Activities	Output Indicators	Implementing Actors	Time Frame	Cost estimates (Kshs million)
2.	Improve automation level from 55% to 100%	Improved operational efficiencies	<ul style="list-style-type: none"> i. Evaluation of existing systems ii. Identification of opportunities for automation iii. Upgrade the identified systems iv. Identify and procure new system v. Fully implement systems integration 	<ul style="list-style-type: none"> Systems evaluation report and work plan Gap analysis report Upgraded system Commissioning report Systems Integration report 	ICTD	<ul style="list-style-type: none"> June 2014 Dec 2014 and Continuous Dec 2014 Dec 2015 Apr 2016 	<ul style="list-style-type: none"> 2 5 5 50 5

Objective 7: To ensure 100% safety and optimal utilization of the company resources

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing Actor	Time frame	Cost estimates (Kshs million)
1	Strengthen internal controls	Efficient and Effective business processes	<ul style="list-style-type: none"> i. Conduct risk assessment ii. Review risk Management Framework iii. Undertake continuous auditing and monitoring of business processes (through automated monitoring system) 	<ul style="list-style-type: none"> Monthly, Quarterly and annual reports Monthly, Quarterly and annual reports Monthly, Quarterly and annual reports Automated System in place 	IARD,IAM	<ul style="list-style-type: none"> Annual Annual Annual Dec. 2014 	<ul style="list-style-type: none"> 3 2 17

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing Actor	Time frame	Cost estimates (Kshs million)
2	Ensure business systems continuity	Business continuity	<ul style="list-style-type: none"> i. Develop a corporate business continuity strategy ii. Implement Corporate Business Continuity Strategy 	<ul style="list-style-type: none"> Approved business continuity strategy Implementation report 	MD/FD /ICTD	Dec-14	5
3	Provision of onsite security	Reduction of theft of company property	<ul style="list-style-type: none"> i. Conduct audit of all company property and tag them ii. Develop a company asset register iii. Reinforce internal security services by use of outsourced security services iv. Carry out forensic investigations on theft cases v. Use of modern technology (CCTV, alarm systems, electric fence, biometric system) vi. Continuous surveillance and collection of intelligence vii. Arrest and prosecution 	<ul style="list-style-type: none"> No. of property tagged Asset register in place Hybrid security in place Investigation reports Automated security system in place Surveillance and intelligence Reports No. of cases reported for prosecution 	FD/CS FD/CS CS CS ICTD/CS CS CS	Jun-15 Jun-15 Annually Continuous Jun-15 Continuous Continuous	10 6 10 5 20 10 10

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing Actor	Time frame	Cost estimates (Kshs million)
4	Obtaining insurance cover for assets	Business continuity	i. Classify company assets according to potential risks	Assets risk classification register	DHRA	Annually	10
			ii. Procure insurance services for Company assets	Policy documents	DHRA	Annually	20
5	Enhance implementation of fleet management system	Reduction in fleet operational costs	i. Review the fleet management system	More efficient system in place	DHRA	Continuous	25
			ii. Implement the system	No. of fleet being tracked			0

THEME7: HUMAN RESOURCE MANAGEMENT

Objective 1: Improve staff productivity level from 65% to 90% by June 2019

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actor	Time frame	Cost estimates (Kshs million)
1.	Undertake a review and alignment of the organogram	Efficiency and effectiveness in operations	Identify the existing gaps in current structure	Gaps identified	DHRA	Sept 2014	3
			Prepare a revised structure that aligns to the strategic plan	New structure in place	DHRA	Jan 2015	
2.	Carry out staff rationalization	Optimum productivity	Implement recommendations of the approved report	Status of implementation of recommendations	DHRA	June 2017	50
3.	Undertake manpower planning	Optimum staffing	i. Develop and implement annual man power recruitment plan	Approved plan	DHRA	Annually	630
			ii. Review and implement staff retention plan	No. of staff exits against set standard	DHRA	Annually	0

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actor	Time frame	Cost estimates (Kshs million)
4.	Undertake succession planning	Business continuity	Review and implement a succession planning policy	Policy in place and being implemented	DHRA	June 2016	0
5.	Implement change management	Optimum productivity	Develop and implement change management programs	No. trained Perception surveys	DHRA	June 2019	35
6.	Implement performance based remuneration	Increased productivity	i. Review performance management policy to include retainer pay plus performance based commissions for management staff	Revised performance management policy in place	DHRA	June 2015	25
			ii. Review and strengthen performance appraisal system				

Objective 2: Improve employees' satisfaction from 68% to 80% by June 2019

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actor	Time frame	Cost estimates (Kshs million)
1.	Undertake training and development	Increased productivity	<ul style="list-style-type: none"> i. Develop and implement a career development policy ii. Establish training calendar/plan based on the competency assessment of the target groups iii. Implement competency-based approach to training and career development 	<ul style="list-style-type: none"> Approved policy Approved annual training calendar No. trained 	DHRA	<ul style="list-style-type: none"> June 2015 June of every year Annually 	600
2.	Improve work environment	Increased productivity	<ul style="list-style-type: none"> i. Implement Occupational Health & Safety Act 2007 ii. Undertake work environment satisfaction survey 	<ul style="list-style-type: none"> No. of activities undertaken Survey report 	DHRA	<ul style="list-style-type: none"> Continuous Annually 	<ul style="list-style-type: none"> 20 10

THEME 8: BRAND EQUITY AND INSTITUTIONAL STRENGTHENING

Objective 1: To have a Nairobi City Water Tower in place by June 2019

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actor	Time frame	Cost estimates (Kshs million)
1.	Enter in public private partnerships	Increased resources	Conduct a feasibility study for development of Nairobi City Water Tower	Feasibility study report	MD/TD/FD	Jan 2015	20
			Prepare a detailed design for the Nairobi City Water Tower	Design for the tower prepared	MD/TD/FD	June 2015	180
		Improved visibility of the company	Identify and engage potential private partners to participate in development of the Nairobi City Water Tower	Amount of funds generated	MD/FD	June 2015	0
			Undertake construction of the Tower	Water tower in developed	MD/TD/FD	June 2019	2000

Objective 2: Improve the level of brand equity from 35% to 100% by 2018/19

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actor	Time frame	Cost estimates (Kshs million)
1	Harmonise brand equity within the company	Unique Company identity	Review of slogans, logo and colour codes	Harmonized brand equity	CAM	2015/16	250
2.	Enhance positive public image	Cordial relationship with customers	Improve on service delivery and quality	Improvement in level of customer satisfaction	MD	2015/16	20

Objective 3: Strengthen Company's partnership with stakeholders at national, regional and international levels

S.NO.	Strategy	Expected output(s)	Proposed actions	Output indicator(s)	Implementing actor	Time frame	Cost estimates (Kshs million)
1	Seek membership in relevant Associations	Knowledge sharing and projects' support	Renew of membership Enroll in other relevant Associations	Number of Associations NCWSC is affiliated to	MD	2018/19	10
2.	Participation in relevant congresses, conferences, workshops and seminars	Knowledge sharing and capacity building	Registration and Subscriptions to relevant professional bodies	No. of congresses, conferences, workshops and seminars NCWSC is represented	MD	2018/19	30



CHAPTER SIX

Financing the Strategic Plan

A cashier serving a customer

6.0 Financing the Strategic Plan

6.1 Estimated Costs

This Strategic Plan has eight key result areas/themes and several strategic objectives. Each objective will involve implementation of certain activities. A total of Kshs. 42 billion will be required to implement the strategic plan over and above the regular operations expenditure. The estimated costs for implementation of the various objectives are as captured in Table 7.

Table 7: Summary of estimated strategic Plan implementation costs

Theme	Objective	Cost per objective (Kshs million)	Cost per theme (Kshs million)
1. Enhanced and sustainable quality water sources, production and storage	1. To enhance the water sources capacity to meet 2019 demand of 782,000m ³ /day by 2018/19	5,763	6,488
	2. To ensure 100% compliance to NCWSC water quality standard as adopted from WHO and KEBS	725	
2. Optimized transmission and equitable distribution of quality water	To sustainably transmit and distribute 770,000m ³ /day by June 2019	–	4,061
3. Reduction of Non Revenue Water	To reduce Non Revenue Water from 40% to 16% by June 2019	–	3,215
4. Wastewater management	To efficiently collect, convey, treat and dispose off 400,000m ³ per day of wastewater in an environmentally friendly manner by 2018/19.	–	17,322
5. Revenue growth and customer loyalty	1. To grow the sales volume from 60% to 84% of the production by June 2019.	1,927	2,420
	2. To increase the customer base from 280,000 to 400,000 by June 2019	77	
	3. To increase customer satisfaction level from 69% to 90% by June 2019	416	

Theme	Objective	Cost per objective (Kshs million)	Cost per theme (Kshs million)
6. Financial stewardship	1. Increase revenue collection from 94% to 98% by 2018/19	355	4,804
	2. Increase the current revenue base by 68% (from kshs.6 billion to Kshs. 10.08 billion) by 2018/19	60	
	3. Reduce accounts receivables of KShs. 9 billion to not more than 4.5 billion by 2018/19	20	
	4. Reduce the level of accounts payables from Kshs. 3.9 billion to Kshs. 1.3 billion by 2018/19	4,000	
	5. Secure external funding of up to Kshs 20 billion by 2018/19.	37	
	6. To ensure 100% automation and integration of all business processes by June 2019.	169	
	7. To ensure 100% safety and optimal utilization of company resources.	163	
7. Human resource management	1. Improve staff productivity level from 65% to 90% by June 2019	743	1,373
	2. Improve employees' satisfaction level from 68% to 80% by June 2019	630	
8. Brand equity and institutional strengthening	1. To have a Nairobi City Water Tower in place by June 2019	2,200	2,510
	2. Improve the level of brand equity from 35% to 100% by 2018/19	270	
	3. Strengthen Company's partnership with stakeholders at national, regional and international levels	40	
Total			42,193

6.2 Sources of Funds

The funds for implementing the strategic plan will largely be from internally generated funds. This calls for proper pricing of water to ensure sustainability of water and sanitation services in the County. Proper pricing will also encourage consumers to conserve water and at the same time reach more customers.

The deficit is expected to be sourced from:

- i. Public private partnerships:** A number of projects are earmarked to be financed through public private partnerships. The projects include secondary and tertiary sewer reticulation system, water reticulation and NCWSC Water Hub (Tower).
- ii. Development partners:** The development partners are expected to support development of additional water sources including dams, water intake works, water treatment works, water trunk mains, distribution network in the City, trunk sewerage systems and sewer

treatment works. In addition, the development partners are expected to support and finance a revolving fund that is anticipated to trigger rapid connectivity to water and sewer to consumers.

6.3 Management of Funds

The Company will concentrate its resources on the Plan priority areas so that there is efficiency and effectiveness. Through effective management the Company shall ensure that resource utilization is as intended. The Company shall continue to improve its financial and accounting system by investing in improvement of financial management systems and strengthening budgetary controls. Periodic reporting will also be enhanced and the reports used to monitor and control expenditure.



CHAPTER SEVEN

Institutional Structure

N.C. WATER AND SEWERAGE CO. LTD.

The Company's Headquarters at
Kampala Rd ,Nairobi

7.0 Institutional Structure

7.1 The Board of Directors

The Board of Directors (BOD's) role is to provide policy guidelines and oversight in the management of the Company. The Board has the responsibility to establish and maintain full and effective control over the strategic, financial and operational direction of the Company as well as ensuring compliance to policies, procedures and regulations.

The Board of Directors include eleven (11) members plus the Managing Director and the Company Secretary. The Board also has three committees: Finance, Administration and Communication; Technical, Commercial and ICT; and Audit , Risk and Governance.

7.2 Office of the Managing Director

The Managing Director (MD) shall ensure proper and efficient management of the day-to-day operations of Nairobi City Water and Sewerage Company under the policy guideline of the Board of Directors. The responsibilities of the MD will be to:

- i. Interpret and implement the decisions of the Board;
- ii. Oversee the formulation and implementation of appropriate policies and procedures within the Company;
- iii. Provide organizational leadership and supervision of all directorates/departments in order to achieve the Company's mandate; and
- iv. Spearhead various Company initiatives.

7.3 Directorates and Departments

To spearhead implementation of the strategic plan there are seven Directorates headed by Functional Directors and one headed by Managing Director. These are Financial Services and Strategy, Technical, Commercial, Human Resource and Administration, Information Communication Technology, Internal Audit and Risk, Legal and Security Services and Managing Director's Office. The functional Directorates are further divided into departments and sections. In addition to this structure, there are six regions headed by Regional Managers who report to the Managing Director.

7.4 The Organogram

The organization structure for the company is as depicted below.

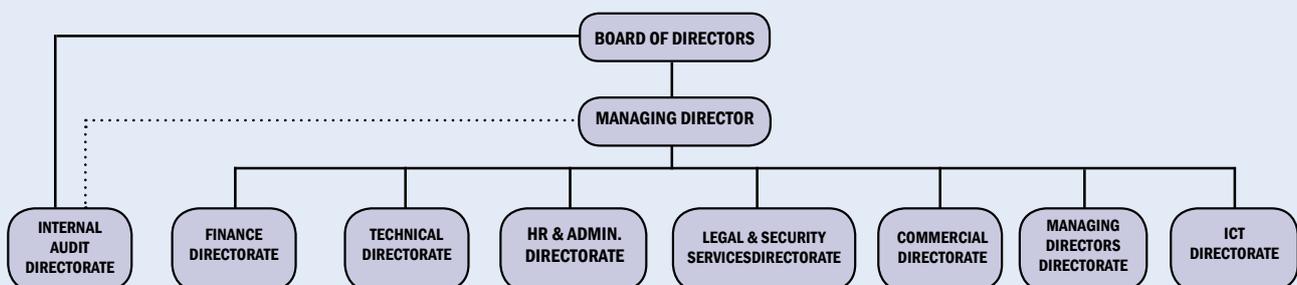
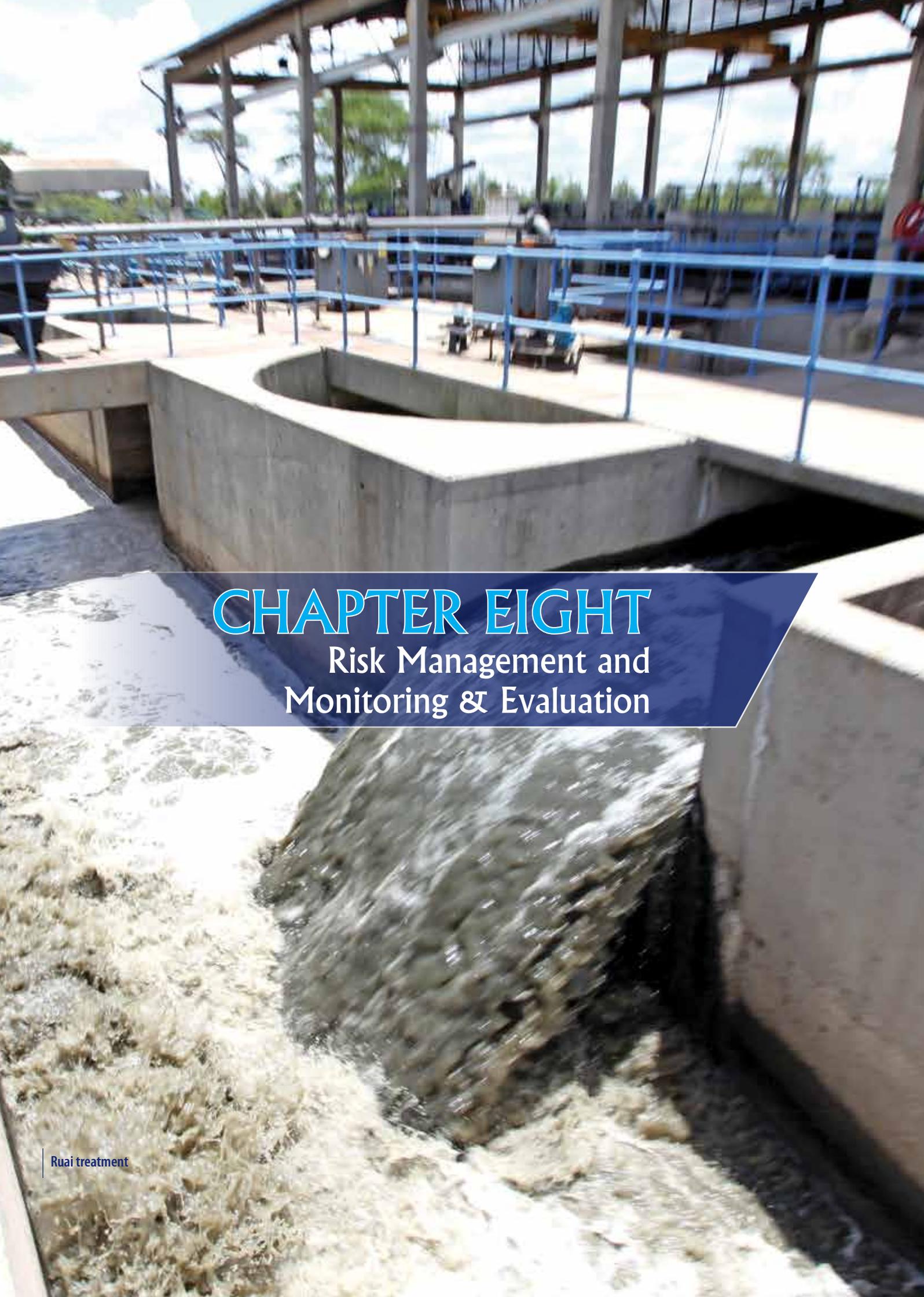


Figure 7: NCWSC's Organogram

A photograph of a water treatment facility. In the foreground, there is a concrete structure with a large opening where water is cascading down, creating a white, frothy splash. The water appears to be moving from a higher level into a lower channel. In the background, there are several concrete tanks or basins, each surrounded by blue metal railings. The facility is open-air, with a clear sky and some greenery visible in the distance. The overall scene depicts an active industrial or municipal water treatment process.

CHAPTER EIGHT

Risk Management and Monitoring & Evaluation

8.0 Risk Management and Monitoring & Evaluation and KPIs

8.1 Risk Management

The main objective of risk management is to reduce the likelihood of risk exposures and the impact thereon. The process involves identifying risk drivers, analyzing their causes, assessing their likelihood and impact, instituting the mitigation measures and monitoring and evaluation of the implementation.

The company has developed a risk management framework which ensures the following: -

- i. Significant strategic, operational, compliance and financial risks have been identified and prioritized.
- ii. Management reports and information from internal and external auditors are reviewed and acted on promptly.
- iii. Management is held accountable for continuous implementation of the risk management framework within the institution
- iv. The Board of Directors oversees the overall implementation of the framework

8.2 Monitoring and Evaluation

8.2.1 Objectives of Monitoring and Evaluation (M & E)

To be able to attain the desired outcome from the identified strategies, the business plan must be carefully implemented. Successful implementation of the plan requires clarifying decision rights, improving information flow, establishing the right motivators (incentives and sanctions) and structuring the organization to suit the strategies put in place. Further, there is need for an adequate M & E framework to be in place.

8.2.2 Monitoring and Evaluation (M & E) Framework

The following M & E framework will be put in place by NCWSC management in order to ensure implementation of the strategic plan:

- v. An M & E committee comprising of representatives from all directorates has been established to oversee the implementation of the strategic plan.
- vi. The M&E committee will hold monthly meetings to review the status of the strategic plan implementation.
- vii. The M & E committee will be reporting quarterly to the Board of Management on the progress of the strategic plan implementation.
- viii. The Board of Management will be reporting quarterly to the Board of Directors on the progress of the strategic plan implementation.
- ix. The strategic plan will be reviewed annually. Towards this, the Company will engage services of an independent external expert to facilitate the review.

Note: The key performance indicators in section 8.3 will provide guidance on more objective review of the progress of the strategic plan implementation.

8.3 Key Performance Indicators

Table 8 shows the base Key Performance Indicators (KPIs) for 2013/14 and projections for financial and non-financial targets set for the years 2014/15 to 2018/19.

Table 8: Key performance indicators

KPI	Unit	Level of achievement/Targets					
		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
1. Volume of water abstracted	m ³ /d	579,700	600,000	650,000	680,000	770,000	823,000
2. Increased treated water volume	m ³ /d	552,800	560,000	615,000	650,000	700,000	782,000
3. Volume of water transmitted	m ³ /d	512,000	522,000	540,000	550,000	680,000	770,000
4. Volume of water sold	m ³ /d	340,000	392,000	401,500	418,000	440,000	646,800
5. Level of water demand met	%		67	67	67	100	100
6. Non Revenue Water (physical losses)	%	21	20	18	16	13	10
7. Non Revenue Water (commercial losses)	%	18	10	9	8	7	6
8. Water quality compliance level – Plants (Residual Chlorine)	No.	91085	91085	91085	91085	91085	91085
9. Water quality compliance level – Plants (Residual Chlorine)	%	100	100	100	100	100	100
10. Water quality compliance level – Plants (Physico-chemical –pH, Color, Turbidity)	No.	91085	91085	91085	91085	91085	91085
11. Water quality compliance level Plants(Physico-chemical –pH, Color, Turbidity)	%	100	100	100	100	100	100
12. Water quality compliance level –Plants (Total Coliform and E.coli)	No.	1800	2696	2696	2696	2696	2696
13. Water quality compliance level –Plants(Total Coliform and E.coli)	%	100	100	100	100	100	100
14. Improved efficiency in quality control process	%	60	64	66	69	95	100
15. Water quality compliance level – Distribution (Residual Chlorine)	No.	12,000	12734	13172	13415	16579	18769
16. Water quality compliance level – Distribution (Residual Chlorine)	%	100	100	100	100	100	100
17. Number of samples collected – Distribution (Physico-chemical –pH, Color, Turbidity)	No	12,000	12734	13172	13415	16579	18769

KPI	Unit	Level of achievement/Targets					
		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
18. Water quality compliance level - Distribution (Physico-chemical –pH, Color, Turbidity)	%	100	100	100	100	100	100
19. Water quality compliance level – Distribution (Total Coliform and E.coli)	No	6000	6355	6574	6696	8277	9372
20. Water quality compliance level – Distribution (Total Coliform and E.coli)	%	>95	>95	>95	>95	>95	>95
21. Hours of supply	Hours /day		18	18	18	24	24
22. Length of water pipelines extended in formal areas	KM		12.3	10	8	10	20
23. Length of water pipelines rehabilitated in formal areas	KM		1	0	50	150	150
24. Water reservoir cleaned	No.	0	8	8	8	8	8
25. Construction of reservoirs	No.	0	0	0	0	1	1
26. Swabbing of transmission and distribution pipelines	KM	0	20	36	36	36	36
27. Length of water lines laid in informal settlements	KM	15	60	60	60	60	60
28. No. of Water kiosks constructed in informal settlements	No.	10	10	10	10	10	10
29. No. Public prepaid meter installation in informal settlements	No.	20	40	40	40	40	40
30. No. of water connection in informal settlements	No.	100	4,000	4,000	4,000	4,000	4,000
31. Volume of wastewater conveyed	m ³		100,000	170,000	240,000	340,000	400,000
32. Volume of wastewater treated and disposed	m ³		100,000	170,000	240,000	340,000	400,000
33. Level of compliance to regulatory requirements on wastewater management	%		30	50	70	90	100
34. Amount of power harnessed	MW		0	0	0.1	0.2	0.3
35. Length of sewers laid in the Informal Settlements	KM		10	10	10	10	10
36. No of Ablution blocks constructed in the informal settlements	No.		12	10	10	10	10
37. No of sewer connections in informal settlements	No.		2,000	2,000	2,000	2,000	2,000
38. No of standalone toilets in informal settlements	No.		80	80	80	80	80

KPI	Unit	Level of achievement/Targets					
		2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
39. Customer base	No.	280,000	300,000	330,000	345,000	380,000	400,000
40. Customer Satisfaction level	%	69	75	75	80	85	90
41. Revenue Base	KShs. Bn.	6	9.45	9.5	9.7	9.8	10
42. Revenue collection level	%	94.5	95	95	96	97	98
43. Reduce the accounts receivables	KShs. Bn.	9	8	7	6	5.5	4.5
44. Reduce the level of accounts payables	KShs. Bn.	3.9	3.0	2.5	2.0	1.5	1.3
45. Raising of external funding	KShs. Bn.		4	4	4	4	4
46. Level of adherence to annual budgets	%	100	100	100	100	100	100
47. Level of recurrent costs as a % of revenue	%	78	77	77	76	76	75
48. Level of automation	%	55	80	80	90	100	100
49. Business systems continuity level	%	40	70	100	100	100	100
50. Number of staff per 1,000 water connections	No.	8.9	8.7	8.5	8.3	8.1	8
51. Level of public confidence	%	68	70	73	76	78	80
52. Training & Development	No.	2,800	2,800	2,800	2,800	2,800	2,800
53. Level of employees satisfaction	%	68	75	75	77	79	80
54. Staff performance management	%	65	70	75	80	85	90
55. Improve Level of Brand Equity	%	35	45	60	75	85	100

ANNEX 1: IMPLEMENTATION STATUS OF 2010/11 – 2014/15 STRATEGIC PLAN

SNO.	Strategic Themes	Strategic objectives	Unit of measure	2010-11			2011-12			2012-13			2013-14 half-year(July-Dec2013)			Ave.% perf.
				Target for period	Actual	% perf.	Target for period	Actual	% perf.	Target for period	Actual	% perf.	Target for period	Actual	% perf.	
1	Revenue Collection		Ksh Bn.	5.5	4.29	78.00%	5.81	4.90	84%	6	5.324	88.73%	3.00	2.98	99%	88%
2	Non-Revenue Water (NRW)	Reduce NRW from 40% to 30% by 2015.	%	38	37	102%	36	39	91%	34	39.8	85.4%	32	39.7	81%	90%
a		Repair of leak within 48hrs	Hrs	48	31	155%	48	23	209%	48	78.4	61.22%	48	72	67%	123%
b		Replace 100km of network by 2015	KM	20	2.454	12.27%	20	16	81%	20	5.713	28.57%	10	5.33	53%	44%
c		Install all zonal meters by 2015	No.	44	33	75%	42	11	26%	42	0	0.00%	42	0	0%	25%
3																
a	water supply	Production levels	Million m3	168	168	100%	167.7	177	106%	184	190.4	103%	100.4	100.64	100%	102%
b		Construct 125Km water network by 2015	KM	25	27	107%	25	14.5	58%	25	29.8	119.20%	12.5	5.33	43%	82%
4	Automation/ System Integration-	Attain 50% automation of all operations by 2015(10% annually)	%	100	96	96.00%	92	76	83%	23	18	78.26%	40	37	93%	87%
5	Human Resource Rationalization and Staff Productivity	Conduct Job evaluation, Salary Review & Corporate Restructuring (by immediately/by 2010)	Staff per 1,000 water & Sewer connections	5	5	100.00%	5	5	100%	5	5	100.00%	5	5	100%	100%
6	Compliance, Enforcement and Security	Reduce Incidences of security by 80% by 2010	%	100	84	84%	100	90	90%	100	82	82.00%	100	75	75%	83%
7		Conduct customer satisfaction survey annually	%	50	70	140%	80	77	96%	75	75	100.00%	100	85	85%	105%

ANNEX 2 - WATER AND SEWER EXTENSION AND REHABILITATION AND EQUIPMENT

PROJECT
NON-REVENUE WATER
(a) Reducing physical losses:
Metering:
Bulk and regional meters including chambers
Rehabilitation of production meters
Installation of meter benches
Replacement of consumer meters, Including pre-paid meters
Installation of High end consumer AMRS (1000)
Organizational strengthening:
Expertise support
Trainings/Benchmarking
GIS Equipment
Leak Detection Equipment
Electromagnetic Flow Meters
Pressure Reducing Valves
Flow and Pressure Loggers
Anti fraud gate valves and composite water boxes for pilot study
Under pressure drilling machines and accessories
Customer Smart meters
Pipes and fittings
(b) Reducing commercial losses:
Customer data cleanup
Customer mapping
Domestic with meter replacement
ICT and technology advancement for revenue collection
Publicity/awareness (internal customers, road shows, radio, TV, site visits, etc)
Customer education and clinics
Customer surveys
NETWORK EXTENSIONS
(a) Water – areas of unplanned developments:
Gigiri-kagundo road (18 KM)
Airport industrial area (29 KM)
Kaloleni-Mbotela (46 KM)
Industrial Area- Enterprise road(9 KM)
Naivasha road-Ngong road (27 KM)
Mwiki-Kasarani- Ruai-Utawala, Njiru, Gatharaini, Githurai
(b) Sewers:
Kasarani
Mwiki
Zimmerman
Kahawa West
Kawangware
Riruta

PROJECT
Dagoretti
Utawala
Revolving fund-sewer
ENHANCING PRO-POOR ACCESS TO WSS
Extending water and sanitation services to informal settlements targeting women, youth and disadvantaged groups
Establish alternative management arrangements suitable for informal settlements, e.g. use of women and youth (establishing appropriate model)
Establishing output based projects in informal areas - Kiambiu area
Prepaid meters - use of tokens
Corporate Social Responsibility -Water sources protection

Some specific water extensions in formal areas

- I. Laying DN 900, 20 KM transmission pipeline.
- II. Swabbing all transmission pipelines, maintenance of pumps and appurtenances.
- III. Clean 16 water reservoirs
- IV. Laying of 18 KM Kiambu - Kagundo Road -Eastern By pass water distribution Pipeline and terminal reservoir in Embakasi.
- V. Laying 20 KM Water Supply Improvement pipeline from Kabete James Gichuru rd, Kibera Sothern Bypass, Mombasa rd.
- VI. Laying 30 KM Water Supply Improvement pipeline from Kabete through Uthiru to Karen and terminal reservoir at Karen.
- VII. Laying of 100 KM water pipelines for water distribution improvement in targeted areas (DN 300-600)
- VIII. Laying of 200 KM water pipelines for water distribution rehabilitation in targeted estates (DN 50 -200)

Some specific water extensions in informal settlements

Areas where the projects will be undertaken:

- Kiambiu-8 KM,1000connections,
- Mathare-20 KM,3000 connections,
- Babadogo-7 KM,1000 connections
- Matopeni-2000 connections,
- Riverbank-2000connections,
- Kawangware-2 KM,
- Kibera-20km,500 connections,
- City cotton-500connections,
- Kahawa Soweto-4 KM, 500connections,
- Kibagare 0.1 KM, Mukuru- 100 KM, 4000connections,
- Satellite,
- Korogocho-40 KM, 1500 connections,
- Silanga-2000 connections,

Trunk Sewers

- Rehabilitation of Dandora treatment works
- Kariobangi treatment works
- Karen trunk sewer
- Kamiti North trunk sewer
- Kamiti South trunk sewer
- Soweto trunk sewer
- Thigiri trunk sewer
- Mutundu trunk sewer
- Gitathuru trunk sewer
- Upper Parklands trunk sewer

Sewer – Extension/connection in informal Settlements

1. Mowlem 8 KM
2. Mashimoni 2 KM
3. Kawangware 2 KM
4. Patanisho 5 KM
5. Mladi Embakasi 5KM
6. Mukuru, Kibera, Waithaka 19 KMs
7. Kibagare 2 KM
8. Matopeni 1,000 Connection
9. Other areas 25 KM, 1000 connection