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COUNTY GOVERNMENT OF BUNGOMA

COUNTY ASSEMBLY OF BUNGOMA
(LPCS)
24 JUL 2024
TABLED
By: *H.M. Ndusabi*



**COUNTY ASSEMBLY OF BUNGOMA
OFFICE OF THE CLERK**

THIRD ASSEMBLY-THIRD SESSION

**TOURISM, ENVIRONMENT, WATER AND NATURAL RESOURCES
COMMITTEE**

ON

THE OPERATION OF THE COUNTY WATER RIG

JULY, 2024.

COUNTY ASSEMBLY OF BUNGOMA
(LPCS)
24 JUL 2024
NOTICE ISSUED
By: *H.M. Ndusabi*

**Clerks Chambers
County Assembly Buildings
P.O BOX 1886 - 50200
BUNGOMA, KENYA**

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CHAPTER ONE

1.0 PREAMBLE

Mr. Speaker sir, it is my pleasure to present the report on the operation of the County water rig from the Fy 2020/2021, Fy 2021/2022, Fy 2022/2023 and Fy 2023/2024.

1.1 The Mandate of the committee

Mr. Speaker Sir, The sectoral Committee on Tourism, Environment, Water and natural resources was constituted pursuant to the provisions of Standing Order No 217(1) of the County Assembly of Bungoma and executes its mandate in accordance with Standing order No 217(5) which provides as follows:

- a) Investigate, inquire and report all matters relating to the mandate, management, activities, administration, operations and estimates of the assigned departments.
- b) Study the programme and policy objectives of departments and the effectiveness of the implementation;
- c) study and review all county legislation referred to it;
- d) study, assess and analyze the relative success of the departments as measured by the results obtained as compared with their stated objectives;
- e) investigate and inquire into all matters relating to the assigned departments as they may deem necessary, and as may be referred to them by the County Assembly;
- f) to vet and report on all appointments where the constitution or any law requires the County Assembly to approve , except those under Standing order 185(Committee on Appointments); and
- g) make reports and recommendations to the County Assembly as often as possible, including recommendations of proposed legislation.

1.2 Committee Membership

Mr. Speaker Sir, the Committee on Labour Relations, Member Service and Facilities comprises of the following Members:-

1. Hon.Edwin Opwora Chairperson
2. Hon.Martin Chemorion Vice Chairperson
3. Hon.Joseph Juma Member
4. Hon.Anthony Luseneke Member
5. Hon.Meshack Simiy Member
6. Hon.Milliah Masungo Member
7. Hon.Sudi Busolo Member
8. Hon.Vitalis Wangila Member
9. HonJames Mukhomgo Member
10. Hon.Orize Kundu Member
11. Hon.Benard Kikechi Member
12. Hon.George Kwemoi Member
13. Hon. Aggrey Mulongo Member
14. Hon.Benjamin Otsiula Member
15. Hon.Dorcas Ndasaba Member

1.3 Terms of reference

Mr. Speaker sir, the committee concentrated itself on the operation of the County water rig with the following terms of reference.

1. The cost of water rig with its accessories.
2. The current number of boreholes sunk across the county to date.
3. The approved budget for rig operations in the Fy 2023/2024
4. The number of skilled operators operating the rig.
5. The standard costs of upgrading a borehole.

1.3 Background Information

Mr. Speaker Sir,

The Bungoma County Water Drilling Rig Policy was informed by various national and international statutory documents. These include the Constitution of Kenya 2010, under Article 43, which guarantees access to safe and adequate water as a basic right, and the Water Act, 2016, which provides for the conservation, apportionment, and use of water resources. Additionally, the policy was guided by the National Climate Change Action Plan, Kenya Vision 2030, and the United Nations Sustainable Development Goals (SDGs), which outline a global framework and commitment to sustainable development.

The Bungoma County Rig Policy was developed to provide a policy mechanism to guide the operations of the county water drilling rig, facilitate the adoption and compliance with relevant international and national standards for water drilling, and support the realization of Kenya's Vision 2030.

1.4 Acknowledgment

Mr. Speaker Sir, I would like to thank the Members of Tourism, Environment, Water and Natural Resources Committee for their dedication, commitment, integrity and valuable contributions on the interrogation of the operation of the County Water Rig. The Committee is grateful to the Office of the Speaker and that of the Clerk of County Assembly for the support received.

Signed..........Date.....

Hon. Edwin Opwora

MCA Luhya Bwake Ward

Chairperson,

Sectoral Committee on Tourism, Environment, Water and Natural Resources

CHAPTER TWO

2.0 OPERATION OF THE COUNTY WATER RIG

2.1 Cost of water rig and accessories

Mr. Speaker sir, the water drilling rig was procured in the FY 2019/2020 at a total cost of Kshs. 77,820,000. The drilling fleet components and equipment included; Main drilling rig, test pumping unit, Support truck, Borehole camera, and Geological survey tool. Another key component was the supplier sinking 10 number test borehole across the county as follows;

S/No	Borehole name	Ward	Details
1	Drilling of Namirembe dispensary borehole	Bukembe West	Drilled and equipped with a hand pump
2	Drilling of St. peters secondary school borehole	Siboti	Drilled and equipped with a hand pump
3	Drilling of Tunyo Chiefs camp borehole	Malakisi/Kulisiru	Drilled and equipped with a hand pump
4	Drilling of Sitikho secondary school borehole	Sitikho	Drilled and equipped with a hand pump
5	Drilling of Brenda Girls secondary school borehole	Misikhu	Drilled and equipped with a hand pump
6	Drilling of Naitiri Girls borehole	Tongaren	Drilled and equipped with a hand pump
7	Drilling of Bituyu secondary borehole	Kimilili	Drilled and equipped with a hand pump
8	Drilling of Webuye west VTC borehole	Bokoli	Drilled and equipped with a hand pump
9	Drilling of Mechmeru	Sang'alo East	Drilled and equipped with

	dispensary borehole		a hand pump
10	Drilling of Masindet SDA borehole	Elgon	Drilled and equipped with a hand pump

2.2 The number of bores sunk across the county in the FY 2020/2021, Fy 2021/2022, Fy2022/2023 and Fy2023/2024

Mr. Speaker sir, so far the department has sunk a total of 48 boreholes across the county as indicated below in different financial years.

FY 2020/2021

S/NO	Borehole name	Ward	Details
1	Drilling of Namutokholo primary borehole	Namwela	Drilled and equipped with a hand pump
2	Drilling of Namwesi primary borehole	Lwandanyi	Drilled and equipped with a hand pump
3	Drilling of Cardinal Otunga TTI borehole	South Bukusu	Drilled and equipped with a hand pump
4	Drilling of Tabani secondary borehole	Ndalu	Drilled and equipped with a hand pump
5	Drilling of Mbakalo primary borehole	Mbakalu	Drilled and equipped with a hand pump
6	Drilling of Kongoli dispensary borehole	Bukembe east	Drilled and equipped with a hand pump

7	Drilling of St. Pauls Maraka secondary borehole	Maraka	Drilled and equipped with a hand pump
8	Drilling of Namboani FYM borehole	Maeni	Drilled and equipped with a hand pump
9	Drilling of Luuhya dispensary borehole	Luuhya Bwake	Drilled and equipped with a hand pump
10	Drilling of Matulo RC primary borehole	Matulo	Drilled and equipped with a hand pump

FY 2021/2022

S/NO	BOREHOLE NAME	WARD	DETAILS
1	Drilling of Siloba shine primary borehole	Kimaeti	Drilled and equipped with a hand pump
2	Drilling of Bunambobi primary borehole	Bumula	Drilled and equipped with a hand pump
3	Drilling of Nangeni primary borehole	South Bukusu	Drilled and equipped with a hand pump
4	Drilling of Muunda primary borehole	Khasoko	Drilled and equipped with a hand pump
5	Drilling of Sioya primary	Kabula	Drilled and equipped with a hand pump

6	Drilling of Muyuni dispensary borehole	Milima	Drilled and equipped with a hand pump
7	Drilling of Lungai dispensary borehole	Naitiri/kabuyefwe	Drilled and equipped with a hand pump
8	Drilling of Namunyiri Girls borehole	Soysambu	Drilled and equipped with a hand pump
9	Drilling of Malomonye primary borehole	Ndivisi	Drilled and equipped with a hand pump
10	Drilling of Bunjosi primary borehole	Misikhu	Drilled and equipped with a hand pump
11	Drilling of Khwiroro primary borehole	Kibingei	Drilled and equipped with a hand pump
12	Drilling of Namisi primary	Musikoma	Drilled and equipped with a hand pump
13	Drilling of Ranje primary borehole	West Sang'alo	Drilled and equipped with a hand pump
14	Drilling Kimuguyi primary borehole	East Sang'alo	Drilled and equipped with a hand pump
15	Drilling of Kaborom primary borehole	Kaptama	Drilled and equipped with a hand pump
16	Drilling of Kamkata primary	Elgon	Drilled and

	borehole		equipped with a hand pump
17	Drilling of Kamukuywa AC primary borehole	Kamukuywa	Drilled and equipped with a hand pump
18	Drilling of Milo market	Sitikho	Drilled and equipped with a hand pump
19	Drilling of St Rafael's primary borehole	Bumula	Drilled and equipped with a hand pump
20	Drilling of St Walumoli primary borehole	Mukuyuni	Drilled and equipped with a hand pump
21	Drilling of Sawali primary borehole	West Nalondo	Drilled and equipped with a hand pump

Fy 2022/2023

S/NO	BOREHOLE NAME	WARD	DESCRIPTION
1	Drilling of County water office borehole	Township	Not equipped
2	Drilling of malakisi dispensary borehole	Lwandanyi	Not equipped
3	Drilling of Bukirimo primary borehole	Kimaeti	Drilled and equipped with a hand pump
4	Drilling of Joyvalley Kimatuni borehole	Bumula	Not equipped
5	Drilling of Governors office	Township	Not equipped

6	Kimilili dispensary borehole	Kimilili	Drilled and it is not upgraded
7	Drilling of Bungoma district borehole	Township	Drilled and it is not upgraded

2.3 Fy 2023/ 2024 allocation on rig operations

Mr. Speaker sir, the table below shows the rig operations allocation of Kshs. 7,235,754 after the 2nd supplementary budget of Fy 2023/2024. The rig operations budgeted was enhanced due to increased demand of boreholes across the county.

Vote	Approved estimates Fy 2023/24	Increase/decrease	Revised estimates Fy 2023/24 (2 nd supplementary)
Fuel	2,250,00	2,000,000	4,250,000
Borehole materials	8,810,745	2,000,000	6,810,745

2.4 Number of skilled operators operating the rig

Mr. Speaker Sir, the number of skilled staff and non- skilled staff attached on the rig is shown as follows;

S/No	Title	Grade	Details
1	Mechanical	P&P	Skilled
2	Geologist	P&P	Skilled
3	Driver- rig	P&P	Skilled
4	Water inspector	P&P	Skilled

5	Driller	3 years contract	Skilled
6	Mechanic	3 years contract	Skilled
7	7 support staff	3 years contract	Non skilled but they provide support during drilling on site

2.5 Standard costs of upgrading a borehole

Mr. Speaker Sir, a borehole is upgraded by installing the following; solar pumping and steel pressed tank/ plastic tanks. The standard rates and costs of the equipment are shown as below.

For steel pressed tank,

Item	Rate	Cost
Steel pressed tank 30,000 litres	2,500,000	2,500,000
Solar pumping system	1,200,000	1,200,000
Distribution pipeline 2km radius	1,500,000	1,500,000
Total		5,200,000

For plastic tanks,

Item	Rate	Cost
Steel pressed tank 30,000 litres	350,000	350,000
Solar pumping system	1,200,000	1,200,000
Distribution pipeline 2km radius	1,500,000	1,500,000
Total		3,050,000

CHAPTER THREE

3.0 COMMITTEE OBSERVATIONS, RECOMMENDATIONS

3.1 Committee Observations

Mr. Speaker sir, the committee made the following observations

1. The county water rig was procured at a total cost of kshs. 77,820,000 which included the main drilling rig, test pumping unit, support truck, borehole and geological survey tool.
2. The county water rig has not generated any revenue for the county government despite the policy outlining that the revenue generated will be utilized for rig maintenance purposes.
3. The county water rig had drilled a total of 48 boreholes across the county of which 42 were equipped while 6 have not been equipped so far.
4. The county water rig drilled the highest number of boreholes sunk 21 boreholes in the Fy 2021/2022 in comparison with the lowest number of borehole sunk 7 boreholes in the Fy 2022/2023.
5. The budget allocation for rig operations to drill boreholes across the county is too low, causing the water rig to remain idle in the Department of Water office.
6. The County water rig is being operated by a total of six (6) skilled and Eight(8) non- skilled support during drilling on site.
7. Standard cost for upgrading a borehole with plastic tank is more cheaper that using steel pressed tank.

7.2 Committee Recommendation

Mr. Speaker sir, the committee made the following recommendation

- 1. THAT** the rig policy to be reviewed to cater for emerging issues on the effects of climate change
- 2. THAT** the County Executive Committee Member for Tourism, Environment, Water, and Climate Change should develop a guideline on the operationalization of the county water rig to generate revenue by hiring it out to the members of the public.
- 3. THAT** the County Government of Bungoma to allocate sufficient funds for the operationalization of the county water rig to drill more boreholes across the county.

Adoption schedule

Mr. Speaker sir,

We the undersigned members of the Tourism, Environment, Water and natural Resources Committee append our signatures adopting this report with the contents therein.

No.	Name	Designation	Signature
1.	Hon. Edwin Opwora	Chairperson	
2.	Hon. Martin Chemorion	Vice chairperson	
3.	Hon. Joseph Juma	Member	
4.	Hon. Anthony Luseneka	Member	
5.	Hon. Milliah Masungu	Member	
6.	Hon. Meshack Museveni	Member	
7.	Hon. Vitalis Wangila	Member	
8.	Hon. Sudi Busolo	Member	
9.	Hon James Mukhongo	Member	
10.	Hon. Orize Kundu	Member	
11.	Hon. Benjamin Otsiula	Member	
12.	Hon. Benard Kikechi	Member	
13.	Hon. George Kwemoi	Member	
14.	Hon. Aggrey Mulongo	Member	
15.	Hon. Dorcas Ndasaba	Member	

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Annex 2. Department response

Annex 3. Adoption Minutes



BUNGOMA COUNTY WATER DRILLING POLICY, 2022

DEPARTMENT OF ENVIRONMENT, NATURAL
RESOURCES, WATER AND TOURISM.

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Abbreviations and Acronyms

CBO	-Community Based Organisation
CECM	-County Executive Committee Member
CIDP	-County Integrated Development Pan
EMCA	-Environmental Management and Coordination Act
GPS	-Global Positioning System
KFS	-Kenya Forest Service
KHPC	-Kenya Population Housing Census
LVNWWDA	-Lake Victoria North Water Works Development Agency
NEMA	-National Environmental Authority
NGO	- Non-Governmental Organisation
NZOWASCO	-Nzoia Water Services Company
PLWD	-People Living With Disability
SDGS	-Sustainable Development Goals
WUA	-Water Users Association
WRA	-Water Resources Authority
WRUAS	-Water Resources Users Association

CHAPTER ONE

Context and Rationale for the Bungoma County water Drilling Rig Policy

1.0.Introduction.

This chapter outlines the context and rationale for the county water drilling Rig Policy highlighting key policies and regulations that have influenced its development. Finally, the chapter presents the drivers of the water drilling rig policy in addition to the process of developing this policy.

1.1. Background.

Water provision in Bungoma County has been a challenge due to increasing population and therefore demand. The county is unable to meet its water demand despite being projected to have adequate water resources .This has partly been caused by the county`s surface water resources quality and quantity being greatly affected by environmental degradation through encroachment, pollution, on- revenue water and poor management by water service providers.

The county Integrated Development Plan (CIDP) 11-2018 -2022 identifies the ground water as a key source of water that should be explored if the county is to ensure communities access constant supply of water in the required quality and quantity desired. Bungoma county has identified small scale water supply systems from ground water as one of the key strategies it has to employ in order to enhance water provision. Qualities of ground water such as:- it is found almost every where and provides water on demand; its obstruction systems can be deployed quickly ;its capital cost are generally lower compared to surface water; ground water systems are drought-resilient especially in large storage aquifers and its systems face smaller transmission and storage losses than surface water systems informed the county`s decision.

Therefore,as a result of ground water being one of the key water sources for Bungoma County, water drilling will be prioritized in order to ensure communities access water. Water drilling for borehole construction is good source of water for individual home stead and even small water supply schemes. Drilling techniques (compressor and mud drilling)vary depending on the ground formation .The methods of drilling vary however ,the most common is rotary drilling that bores vertically into the earth. It must be emphasised that water drilling must adhere to international and national standards in order to obtain portable water and also ensure safety standards are maintained during drilling process. Hence need for this county water Drilling Rig Policy.

1.2. Context and Rationale for the Bungoma County Water Drilling Rig Policy

The Context

The Bungoma county water drilling rig policy is informed by various national and international statutory documents .These include the following

- The constitution of Kenya 2010 under article 43 access to safe and adequate water is a basic right.
- The water act, 2016 that provides for the 'conservation apportionment, and use' of water resources.
- The environment Management and Coordination Act (EMCA)1999 cap 387 that is the national statute that governs protection, conservation and management of the environment.
- EMCA (Water Quality) Regulations (2006) provide for the protection of lakes, rivers, streams, springs, wells and other water sources.
- The Physical Planning Act(1996) Cap 286 that provides for physical planning and development control
- Occupational Health and Safety Act (2007) that provides for the safety, health and welfare of all workers and all persons lawfully present at work places.
- The National Climate Change Action Plan 2018-2022
- Kenya Vision 2030
- United National Sustainable Development Goals(SDGs)that outlines a global framework and commitment for sustainable development.The key SGDs related to work provision include:-
 - Goal 3:Ensure healthy lives and promote wellbeing far all at all ages
 - Goal 6:Ensure availability and sustainable management of water and sanitation for all

The Rationale

Bungoma County seeks to establish an effective, efficient and sustainable mechanism for county Government-owned water drilling rig operations. This policy is therefore developed in order to:-

- a) Provide a policy mechanism to guide operations of the county water drilling rig.
- b) Facilitate adoption and compliance with relevant international and national standards for water drilling.
- c) Facilitate the realization of Kenya's vision 2030 and aspirations of the CIDP II 2018-2022

1.0. Drives of Bungoma County Water Drilling Rig Policy

The county has acquired a water drilling rig unit that consists of the following:-the drilling water rig and support truck; Test Pumping Unit and Geotechnical equipment(Tetrameter and borehole camera).The water drilling rig unit is part of county's strategies to enhance county residents access to adequate and portable water .The constitution of Kenya 2010 placed a human right to adequate clean water to every citizen and given that only 25.8% of the 1,670,570 persons in Bungoma county as per the 2019 Kenya population and Housing census(KPHC)have access to portable water the county must put in mechanism and systems to

enhance realization of the universal access to water and sanitation. The water drilling rig unit components are machinery that requires adequate systems in place to ensure constant operations free from frequent breakdowns if the county is to realize its goal. The county lacks the capacity both technical and human capacity due to limited budgetary allocation to fully keep the rig drilling unit operational on a day to day basis and therefore modalities including own-revenue to assist in maintenance must be explored to ensure sustainable operations. Routine inspections, testing and maintenance of rig components also help avoid accidents from drilling operations.

The county-owned water drilling programme must comply with national and international standards both before and after borehole drilling. All permits and licences laid out by various regulatory frameworks must be obtained. Bungoma County has a huge demand for water, however, the water drilling rig unit may not resolve this demand in the short term and therefore, county stakeholder and community engagements and collaborations shall be key in identifying priority areas where water drilling shall be undertaken.

1.1.Process of Developing the Policy

A participatory approach through consultation with key stakeholders in county water sector informed the process of developing this policy. County water actors including National Environment Management Authority(**NEMA**)Water Resource Authority (**WRA**),Lake Victoria North Water Works Development Agency(**LVNWWDA**)Kenya Forest Service(**KFS**)Kenya Wildlife Service(**KWS**)office of the county Attorney, County devolved departments, county assembly and civil society.

Chapter Two

The Policy Framework

2.0. Introduction

This chapter outlines the goal, policy objectives and guiding principles that will underpin the implementation of the policy

2.1. Goal

The overall goal of this policy is to operationalize the sustainable use of the county owned water drilling rigs for increased access to water by the citizenry of Bungoma County.

2.2. Objectives

The objectives of this policy

- a) To integrate sustainable operation frameworks for water machinery and equipment into the water sector's planning, decision making, budgeting and implementation
- b) To guide the use of county owned water rig for enhanced exploitation of ground water sustainably
- c) To encourage stakeholders engagement and participation in decision making with regard to utilization of county water drilling rigs
- d) To enhance resource mobilization for sustainable ground water exploitation

2.3. Guiding principles

The implementation of this policy shall be guided by the following principles:-

- a) **Professionalism:** The citing, supervision and construction of drilled boreholes in Bungoma County shall be undertaken by competent and registered government contractors.
- b) **Siting:** Borehole preliminaries shall be undertaken earlier and approvals received before commencement of drilling. A hydrogeological desk study shall be carried out and the detailed method for siting agreed (with stakeholders including communities)
- c) **Technology selection and construction method:** The most cost- effective construction method for providing all-year water supply of the desired quantity and quality shall be considered
- d) **Procurement procedures for sitting,** supervision and drilling contracts shall insure that contracts are awarded to competent consultants and drilling contractors. Once regulations are in place, only registered and accredited consultants and contractors will be eligible to tender first.
- e) **Construction:** Boreholes constructed shall be cost-effective with an expected lifespan of 20 to 50 years. Construction shall adhere to specifications with respect to diameter,

depth, casing and screen, gravel pack/formation stabilizer, vertically, drilling additive and sanitary seal.

- f) **Supervision:** Full time supervision is the preferred option in Bungoma County. There shall be a trained and experienced supervisor on the site from when the department/contractor mobilizes his equipment to the site through construction/rehabilitation and completion to demobilization
- g) **Water Quality Testing:-**The water quality for all boreholes shall be tested in accordance with the guidelines for water quality monitoring
- h) **Contract Management :-**Management of the siting ,supervision and drilling contract shall be in a line with national and international systems
- i) **Data:** - a borehole numbering system shall be developed; all new boreholes drilled shall be numbered accordingly, in a manner that can be distinguished for ten to twenty years.
- j) **Monitoring:-**Regular visits to water users with completed boreholes to monitor the water user committees and functionality of the water points after six months and then at least once per year shall be enhanced

Chapter Three

Opportunities for the county Water Drilling Rig and Strategic Policy Interventions

3.0. Introduction

This chapter highlights the opportunities and strategic policy interventions that should guide Bungoma County to sustainable management of the water drilling rig and associated equipment.

3.1. Opportunities and Strategic Policy Intervention

3.1.1. Site Identification

Water drilling operations commence with site identification as bore hole siting requires consideration such as:- prevailing geology and available ground water resources; usage; proximity to other boreholes; accessibility to the other site among other issues.

Strategic Policy Intervention

The county in collaboration with other relevant stakeholders and community shall undertake the following:-

- i. Implement the County Water Plan in site identification
- ii. Undertake the feasibility studies and geophysical surveys to map county ground water resources before commencement of any drilling
- iii. Establish a framework for prioritizing the most water stressed areas and emergency cases for water drilling projects
- iv. Promote equitable distribution of water drilling projects across the county
- v. Strictly adhere to regulations under the **EMCA** act and water act and licencing of sites and acquisition of permits prior and after borehole drilling.
- vi. Undertake drilling on public land and institutions- health centres and public schools in ways that enhance access by surrounding community.

3.1.2. Revenue Generation

The county water drilling rig unit are machinery that could be utilized not only to provide financial resources by for maintenance of the unit but also generate revenue for the county.

Strategic Policy Intervention

The county in collaboration with relevant stakeholders and the community shall undertake the following:-

- i. Develop regulations in consultation with the county treasury on modalities and fees /charges for hiring out the drilling unit or its components
- ii. Develop a clear strategy for sharing the revenue generated through hiring out the rig in consultation with the county treasury and in accordance with the Public Finance Management Act (PFMA)
- iii. Give priority to county drilling projects over hiring out

3.1.2. Operation and Maintenance

The water drilling rig unit are machinery that needs to be serviced to ensure water drilling operations are without any hitches for the county to obtain its objective of increasing water accessibility

Strategic Policy Intervention

The county in collaboration with relevant stakeholders should undertake the following:-

- i. Establish schedule for proper and timely servicing of the rig and associated machinery e.g. framework contract arrangement
- ii. Undertake servicing at qualified providers or even suppliers of the equipment
- iii. Mobilize adequate resource for the water rig drilling operations including budgetary allocations by the county government
- iv. Employ and train rig operators and other requisite officers to oversee operations and maintenance of water drilling rig units in collaboration with Kenya Water Institute
- v. Provisional of Personal Protective equipment (PPEs),tools ,equipment and comprehensive insurance to the rig operators and officers
- vi. Install fleet management systems such as GPS systems,logsheets,work schedules to ensure efficient operations
- vii. Store the equipment in a safe and secure facility

Chapter Four

Policy Implementation Framework

4.0 Introduction

This chapter outlines the approach to policy implementation. It also outlines the key stakeholders and requisite institution framework for effective implementation of this policy through effective coordination.

4.1. Institutional Framework

The complex and technical nature of managing the Drilling rig operation and the need to integrate all key stakeholders' considerations in planning its activities calls for cooperation and consultation among responsible government agencies and stakeholders at all levels. It is particularly important to recognize the existing institutional mechanism and consider way and means by which coordination and cooperation can be enhanced between the many institutions whose mandate relate to underground water provision.

The county department responsible for matters of water provision will constitute working teams to manage the drill rig

The **CECM** will ensure formation of the rig unit consisting of qualified officers under his department that will oversee all the operations and maintenance aspects of the drilling fleet

Key County and National Level Actors

- a) **County department responsible for water service provision** .A key mandate for this department is water services management: conservation and protection of water resources in the Bungoma County. It is the key implementing department of this policy
 - b) **County Environment Committee:** key mandate is planning and oversight of all county environment matters
- Regional Actors**
- c) **Lake Regional Economic Bloc:** constitutes 14 member counties. The bloc seeks to promote trade development and investments among member counties; this will be critical stakeholder as the bloc shared natural resources, cross boundary water and hydro-geo formations. It also promotes ecosystem management which encompasses shared resources among member counties.
 - d) **Lake Basin Development Authority:** The authority is mandated to spur socio-economic development through sustainable utilization and conservation of natural resources in a coordinated approach within the region
 - e) **Lake Victoria North Water Works Development Agency:** LVNWSB a key player in water and sewage service provision through infrastructure development and protection of water resource.
 - f) **NZOWASCO:** will undertake water quality test services.

Key National Level Actors

As Bungoma county develops economically and socially it will seek to collaborate with the National Level Agencies with a mandate bearing access to portable water and other natural resources.

- g) National Environment Management Authority (**NEMA**): is the national regulatory agency coordinating with the decentralized entities. There are various committees on standards enforcement and action plan to support compliance requirements.
- h) Water Resource Authority (**WRA**): has the central water testing laboratory in Kenya .The key mandate is to sustainably and equitably allocate water resources among various competing needs through the process of water use permit. Water quality test should be done at the authority's' accredited laboratory
- i) Ministry of Water and Irrigation: The ministry is mandated to coordinate all water sector agencies and formulate national policies and licencing of all water drilling rigs.

Non- state Actors

- j) CBOs,NGOs in the water,environment,natural resource and forestry space
- k) WUAs,WRAs
- l) Business Community

Key informal sector player

- m) Youth groups and Women groups

Chapter Five

Policy Monitoring and Evaluation, Reporting and Review

5.0. Introduction

This chapter wraps up the policy with highlights on how to monitor report and review the policy. It anchors the monitoring, reporting and review process in the institutional framework outlined in chapter three

5.1. Monitoring and Evaluation

The department of water and natural resource will have the overall responsibility for the implementation of the policy.The **CECM** responsible for water and natural resources, jointly with relevant sector representation will be responsible for ensuring the implementation is followed through. The implementation of the policy will comply with the national laws and regulation governing monitoring and evaluation at all times. To effectively ensure this happens, there shall be an integrated monitoring and evaluation system to rig management policy in the county. A baseline will provide the foundation upon which progress of in shall be measured.

It is among county government intervention policies responsible to make market the county rig operations and stimulate economic development and growth. Performance evaluation by the lead department and other relevant sector will be carried out through key performance indicators (KPI). The monitoring will also be both formative (taking place during policy implementation period with the aim of improving outcomes) and summative (drawing and implementing lessons from policy objectives already achieved or not achieved)

5.2. Reporting

With regard to reporting to the county department responsible for water service provision in Bungoma county shall develop a mechanism for recording and reporting all rig operation activities. There shall be quarterly report in respect to the operations of the County rig submitted to the County Assembly. Such a mechanism will focus on both government and private player activities in the county. To ascertain how it is doing with regard to rig operations, the county government shall institute a framework of standards in keeping with national and international standards.

5.3. Review of Policy

The rig policy shall only be submitted to the county assembly of Bungoma upon being approved by the County Executive Committee. It shall become operational as soon as it is passed by the county assembly, published and publicized by the county government of Bungoma. Such policy operationalization shall be undertaken through requisite relevant legislations.

This policy is flexible and open to adjustment. There may arise the need to deviate from or realign the goals, objectives, orientations or provisions based on the results of monitoring and evaluation status reports and prevailing circumstances. There shall be therefore a window to review and revise/update this report once every five years to ensure its relevance. Any deviations or alterations to the policy must be informed through status reports and measurable changes in prevailing circumstances. The deviations or alterations should aim to achieve objectives that meet the "SMART" and should be within the available resources.

Appendix1: Terminology

Geological survey's the investigation of underground formation with a view to understanding subsurface geology and is able to make appropriate predictions of underground water conditions.

Ground Water' is water that is found beneath' surface and comprises of springs, manual dug wells and boreholes. Globally, it accounts for 97% of the worlds' readily accessible water.

Maintenance' is the activities that perform equipment or facilities to minimize the possibility of damage or the lowering of performance quality because of corrosion, contamination or deterioration for the continuous operation.

Operation' is the performance of practical work, or a state of working or being able to work, or away or process that parts of a machine, system or plant work together smoothly and safely to produce goods in accordance with the procedures

Project Identification' it is the process of developing a preliminary proposal for the most appropriate set of interventions and course of action within specific time and budget frames to address a specific development in particular region or setting

Water Drilling' is the process of drilling holes in the earth's surface for a purpose of reaching a ground water source.