

# WATER NEWS UPDATE



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## NCWSC TAKES WASCO GAMES BY STORM TO EMERGE OVERALL WINNER

The Company won a record 52 trophies to emerge the overall winner in the just concluded 13th edition of the Water Sports Companies Organization (WASCO) hosted by Murang'a Water and Sanitation Company Ltd (MUWASCO).

NCWSC clinched position one in the following disciplines: scrabble, ajua, chess, squash (men & ladies), table tennis men, darts, badminton, volleyball ladies, set piece and athletics while it came second in draught, table tennis ladies and pool table.

Cultural dance and netball took the third position as volleyball men and football took position four in a sporting event where over 50 water companies registered and participated in the competitions.

This year's theme was: **"Combating Climate Change through Sports"**. The clarion call aligns to the efforts undertaken by water utilities and sector stakeholders to adapt and mitigate the effects of climate change.

The event was officially opened by the newly appointed Water, Sanitation & Irrigation Cabinet Secretary, Eng. Eric Muriithi and the host Governor H.E Dr. Irungu Kanga'ta, CBS, at Mumbi Grounds. The CS lauded WASCO for providing the platform for the water sector workforce to learn and benchmark.

He indicated that the Government is cognizant of the provision of water and sanitation as a key enabler of all sectors of the economy..

"As a Ministry, we are keen towards improving accessibility of water and sanitation across the country. We are implementing policies, governance and legal interventions to increase water storage and improve sanitation in the Country." He said.

He added that climate change continues to be the single most threat to water accessibility and called for closer collaborations between the National and County Governments in support of the Government's ambitious plan to plant 15 billion trees by 2032 to better mitigate the threats of severe climatic changes.

"We are alert to the challenges of Climate Change which has also affected water utilities. As a Ministry, we have planted over 1 million tree seedlings as a means of mitigating climate change. I urge us to replicate and scale up these efforts within our water utilities." He stated.



Water, Sanitation & Irrigation Cabinet Secretary, Eng. Eric Muriithi and Murang'a Governor H.E Dr. Irungu Kanga'ta, CBS, flag off the 13th edition of WASCO games



Board Members Cedric Alaro, Esther Muthoni and Johnstone Mukabwa follow proceedings at the opening ceremony of the 13th edition WASCO games.



## RELIEF FOR CITY RESIDENTS AS NCWSC ROLLS OUT MASSIVE SEWER PROJECTS

It is all systems go as thousands of residents across the city are set to be connected to the sewer lines as the Company rolls out massive sewer extension programmes to boost sanitation.

The Company has embarked on an ambitious project to expand sewer lines at Makongeni, Eastleigh, and Kawangware areas.

Board Chairman, Arnold Karanja, while on an inspection tour of the ongoing projects, reiterated that the roll out is critical in enhancing the dignity of the city residents while fulfilling the broader mandate of the Company.

"We are now expanding the sewer lines in various parts of the City to accommodate the rising number of people. Works have already begun and expected to be completed this financial year. to ensure that all residents benefit from improved sanitation services." Karanja said.

He also intimated of plans to extend the sewer lines within Nairobi's Central Business District (CBD) as part of the broader initiative to modernize the City's sewer system to accommodate the city surging population.

One of the mega ongoing project is the Kawangware Sewer Rehabilitation Works involving the installation of a 5.8 kilometre sewer line with diameters of 300-375 mm.

The upgraded once complete and commissioned is set to serve the densely populated Kabiru and Kawangware wards. Currently, the project is 30% complete with projected completion date set for June, 2025.



**Board of Directors led by its Chairman, Arnold Karanja, inspects sewer upgrade project along Eastleigh's 3rd Avenue**

Another project nearing completion is the proposed sewer upgrade along Eastleigh's 3rd Avenue featuring a sewer pipeline with a diameter ranging from 450-732 mm stretching a total length of 600 meters.

The upgrade is designed to enhance the sewer system serving Kaloleni, Makongeni, and parts of the Industrial Area along Lusaka Road.

In Mowlem Ward, construction of a new sewer line is underway and will drain into the Nairobi River Trunk Sewer. The project spans 8 kilometres, with pipes ranging 225mm- 750 mm in diameter.

The ongoing works targets to serve the entire Mowlem Ward and Umoja III. The works is part of a broader strategy to improve drainage and sanitation across the city.

NCWSC, through Athi Water Works Development Agency (AWWDA), is currently undertaking rehabilitation and expansion of Dandora Estate Sewage Treatment Works (DESTW).

The main objective of the assignment is to improve the wastewater treatment process at the Plant leading to a better quality of effluent by improving the efficiency and capacity of the inlet works.



**Ongoing Kawangware Sewer Rehabilitation Works that is set to benefit the densely populated Kabiru and Kawangware wards.**

The rehabilitation once complete will increase the plant's capacity by an additional 20,000 m<sup>3</sup> from 160,000 m<sup>3</sup> /day to 180,000 m<sup>3</sup> /day. The plant's capacity is 160,000m<sup>3</sup>/day and currently treats an average of 130,000m<sup>3</sup>/day of domestic and industrial wastewater.

Due to the gap in coverage, sanitation facilities other than the conventional system in use in Nairobi include Septic Tanks and Pit Latrines serving areas mostly not covered by the sewerage network.

The areas are: Muthaiga, Lower Kabete, Karen, Githurai, Zimmerman, Kasarani, Garden Estate, Thome, Ridgeways, Runda, Ruaka, Utawala and Ruai. Pit Latrines are in use in informal settlement area of Kibera, Mathare and Mukuru.



**Ongoing construction of sewer line in Mowlem Ward**

In the short term, NCWSC through the Nairobi City Regeneration Program has implemented short-term measure such as unblocking and repairing sewers to improve the quality of water and riparian ecosystem of Nairobi City Rivers as well as securing of water and sewerage installations to prevent vandalism.

Some of the challenges experienced in the sewer network are washed away sections, accidental breakages, deliberate vandalism, blockages caused by poor solid waste management through manholes.



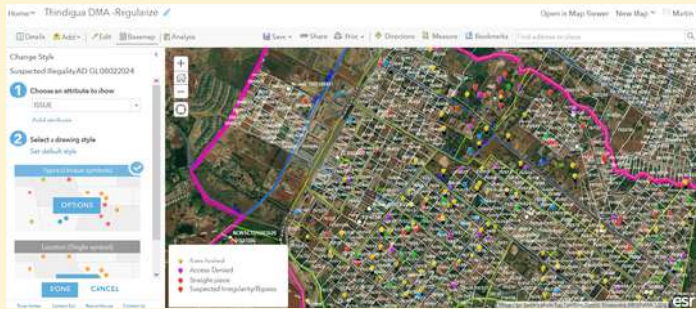
## NCWSC LEVERAGES ON TECHNOLOGY TO ENHANCE CUSTOMER EXPERIENCE

NCWSC has embraced several innovative technologies and systems to enhance its service delivery and operational efficiency.

These advancements are spread across various departments, reflecting the company's commitment to leveraging technology for better customer service and internal processes.

One of the significant transformations is the Cloud-Based GIS Solution, which has revolutionized how spatial data is stored, managed, and accessed.

The GIS platform is now accessible by staff from anywhere using internet-enabled devices, facilitating greater flexibility and operational efficiency.



**Deployment of GIS to locate illegal water connections**

In addition, Enhanced Data Visualization has been achieved through the deployment of interactive maps. These maps allow users to drill down into specific areas and visualize detailed information about individual meters and customer distribution over the web.

This innovation has greatly improved the accessibility and usability of spatial data within the company.

Real-time operations have also seen a boost with the introduction of Real-Time Field Operations Monitoring. GIS dashboards have been implemented, enabling staff to monitor read and unread meters on a map in any given cycle.

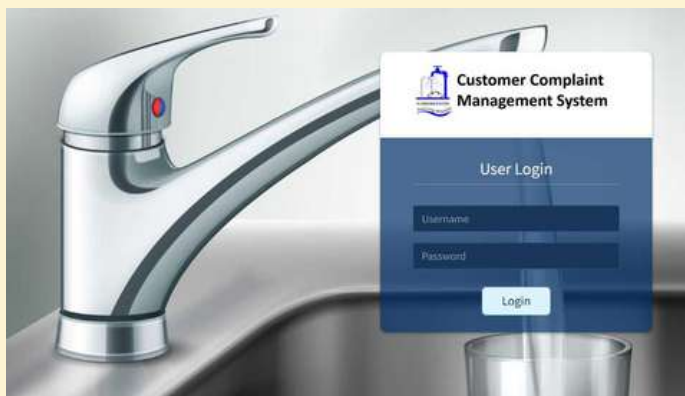
This system provides immediate insights, helping to quickly identify unread meters, anomalies, trends, and patterns, thereby improving decision-making processes.

Further integrating systems for enhanced performance, NCWSC has achieved System Integration and Collaboration by linking the GIS platform with the Billing system.

This integration streamlines the storage, retrieval, processing, and analysis of basis2 customer data with spatial data, while also supporting a multi-user environment.

The company has also developed the Customer Complaint Management System (CCMS) to streamline and improve the resolution process for customer complaints.

This centralized platform allows customers to log complaints and track their progress, ensuring all issues are documented and monitored efficiently.



**The soon -to-be launched Customer Complaint Management System**

The automated ticketing system generates tickets upon complaint submission, assigns them to the relevant department, and keeps customers informed of the status via real-time updates.

The system also provides data-driven insights, enabling the company to identify and address recurring issues, ultimately improving service delivery.

Moreover, the CCMS is accessible through multiple channels, including a web portal, mobile app, and customer service hotline, making it convenient and accessible for customers. The system will be launched soon.

In terms of online service offerings, NCWSC has made several New Additions to the NCWSC Website to increase accessibility and convenience for customers.



**Leak Mapping Tool**

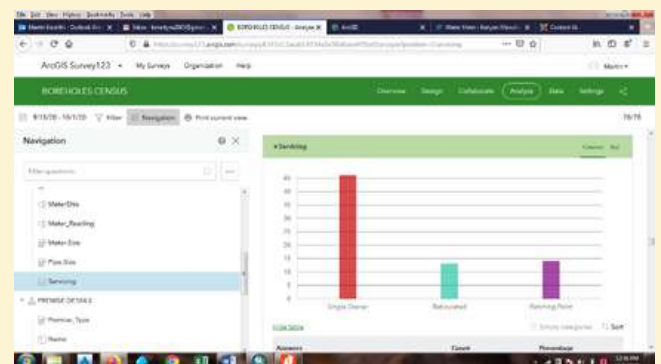
A new sewer module has been introduced, allowing customers to request sewer connections online.

This module reduces the time required for processing new sewer connection requests and minimizes revenue leakage due to unrecorded services.

Additionally, a change ownership module has been added, enabling customers to request a change in account ownership online, which has significantly reduced the turnaround time for processing such requests.



**Customer Identification Survey Tool**



**Borehole Mapping Tool**

These innovations collectively demonstrate NCWSC's dedication to enhancing its technological infrastructure and improving customer experience, positioning the company as a leader in leveraging technology to optimize water and sewerage services.



## RUNNING ON EMPTY: KENYA'S DWINDLING WATER RESOURCES



Kent Mukoya

As 2030 draws closer, the International Community focuses on assessing the progress made towards achieving the Sustainable Development Goals (SDGs).

Broadly, the SDGs are seventeen global goals that were adopted by the United Nations in 2015 as a universal call to action to end poverty, reduce inequalities, guarantee access to foods and water, protect the planet, and ensure that, by 2030, all people are able to enjoy peace and prosperity.

SDG 6 aims to ensure access to safe drinking water and sanitation for all and sustainable management of water resources by 2030. Critically, the United Nations General Assembly recognises access to safe water as a fundamental human right.

SDG 6 is also extremely important in the wider context as nearly all of the other goals are interconnected with and/or reliant on water in some way. Without water, it would be extremely difficult to eliminate poverty, reduce food insecurity and promote good health and well-being.



**Thika Dam at its lowest ever recorded levels in March, 2017 following a devastating dry spell.**

Despite the commitment made, the United Nations data reveals only a slight increase of 4% in the proportion of the global population who can access safely managed drinking water services, rising from 70% in 2015 to 74% in 2020.

Meanwhile, the 2023 United Nations World Water Development Report estimates that roughly 2 billion individuals worldwide still lack access to clean and safe drinking water.

A similar pattern can be seen in Kenya. The global commitment to the water sector is embedded in the country's Constitution, which affirms that access to adequate and high-quality water is fundamental human right. Further, Kenya's Economic Development Plan, Vision 2030, aim to ensure water access for all by 2030.

Nonetheless, reports for the fiscal year 2021/2022 indicate that during the period, only 54.1 % of the Kenyan population, amounting to 26.7 million people out of 49.4 million, had access to water services. Notably, compared to the previous year's 54.3%, the reported coverage had slightly decreased by 0.2 %.

Data demonstrates that Kenya's internal renewable water resources—long-term average annual flow of rivers and recharge of aquifers generated from endogenous precipitation, remained stable at around 21 billion cubic meters per year between 1971 and 2020. However, the country's population almost quadrupled during the same period, rising from 11.5 million to 49.4 million people.

Although the country has reported tremendous progress in the expansion of infrastructure development to widen the water coverage area, Kenyan water faces a concerning trend of decreasing annual water availability per capita.



**Aberdare Forest is one of the catchments areas where the Company water originates from.**

The latest data reveals an annual average of 670 cubic meters per capital, a number much lower than the United Nation's recommended yearly minimum of 1000 cubic meters per capita.

Similarly, at domestic level, the World Health Organization recommends a minimum of 50 litres of water per capita per day. However, reports from the country's Water Services Regulatory Board (WASREB) indicate a declining trend in per capita water consumption per day over the last four financial years, from 32 litres per person in the financial year 2018/2019 to 28 litres per person per day in the financial year 2021/2022.

Kenya's dwindling water sources pose a significant challenge for the country to achieve SDG 6 and provide water for all by 2030. Despite commitments made at both national and international level, Kenya's water accessibility problems are closely linked with declining water resources per capita.

Urgent and decisive action is needed to ensure that the human right to water and sanitation is realised for the Kenyan population.



**Kikuyu Springs is one of the water sources serving the city. Climate change and desertification poses a major threat to water availability in Kenya.**

## ENGINEERING STAFF APPOINTED TO COMMITTEES

Four staff from the Engineering Department have been appointed to serve in the Committees of The Institute of Engineers of Kenya (IEK) for the period 2024/2026.

The IEK in its Special Council meeting approved the appointment of Eng. Abdikhalaq Adan Abdi to serve in the Membership & Welfare Committee while Eng. Lydia Nduku Munene will serve in both Women Engineers Committee and Engineering Standards and Bottom Up Economic Transformation Agenda (BETA) Task Force for Water & Waste Water Committees. Winnie Atieno Opuch and Halkano Roba Duba were appointed to Women Engineers Committee and Governance & Controls Committee respectively.



The mandate of the Women Engineers Committee is to empower Women in Engineering by developing their potential in Engineering and Leadership to achieve high levels of professionalism and inclusivity.

Membership Committee is to promote growth in membership of all classes, create diverse, inclusive and supportive mentorship programme and promote the welfare, diversity and inclusion by ensuring needs of all members are catered for regardless of their race, gender or creed.

The Governance and Controls Committee role is to maintain oversight and ensure the integrity of IEK's Governance, Internal and External Audit, and Financial Controls and conduct organizational risk assessment as well as propose mitigation measures.

In a letter to the appointees, IEK Hon. Secretary, Eng. Jacton Mwembe PE, MIEK, called on them to maximise on their expertise to propel the professional body to greater heights of excellence.

"The Institution takes this opportunity to congratulate the appointed members on their appointment to serve the institution, the Engineering fraternity and the country in general in this capacity. We are certain that their expertise will greatly benefit the Institution towards the achievement of the objectives outlined in the IEK's 2024/2029 Strategic Plan." Said Eng. Jacton Mwembe.

Eng. Lydia Munene is currently ISO Coordinator while Eng. Abdikhalaq Abdi is Engineering Officer. Winnie Opuch is presently Ag. Engineering Coordinator while Halkano Duba is a Regional Technical Officer (Sewer) at Lower Embakasi Region.

Meanwhile, Nairobi City County Governor, H.E Hon. Johnson Sakaja, has appointed Eng. Denis Mugao to the Nairobi City County Taskforce on Building Plans Approvals.

The Taskforce will undertake the audit and review of all building plans constructed over the last 2 years and look into all building plans approved but whose construction is yet to commence and submit a report within sixty (60) days.

Eng. Denis Mugao is currently serving the Company as Waste Water Coordinator at the Engineering Department

**Tonui Kipkurui**  
Corporate Affairs & Liaison Department

## ETHIOPIAN WATER FIRM BENCHMARKS WITH NCWSC

The Company recently hosted Ethiopian Amhara National Regional State Office of Water Development Fund for benchmarking on Water and Sewerage management.

The high-level Ethiopian Water Sector Delegation sought to understand Kenya's Water Sector and the institutional frameworks.

In particular, the delegation had a keen interest to understand and appreciate the Company's mandate of providing water and sewerage services in Nairobi, Kenya's Capital City.

Further, the mission was keen to learn the Company's structure, operations, departments responsible for Human Resource, Finance and tariff structure as well as water supply.



**Managing Director, Eng. Nahason Muguna, chairs the benchmarking session with Ethiopian Amhara National Regional State Office of Water Development Fund in the Board room**

Amhara National Regional State Office of Water Development Fund is an equivalent of the Kenyan Water Sector Trust Fund (WSTF) whose mandate is to assist in financing water, sanitation and water resources management projects to the underserved and marginalized rural and urban areas.

The team also had an interest to learn from Kenya's policy, regulatory and strategy issues for the Sector, and to understand the Ministry of Water, Sanitation and Irrigation role in supporting Sector Institutions.

The delegation will also benchmark with Sector Institutions including Water Sector Trust Fund (WSTF), Water Services Regulatory Board (WASREB), Athi Water Works Development Agency (AWWDA), and three Water Services Providers namely Nairobi, Nyeri, Mathira and Muranga South.

The Ethiopian delegation are keen to explore WSTF's Result Based Financing Programmes, hence the choice of the three WSPs which all have implemented the Output Based Aid (OBA) Programme successfully.

On February 24th to 28th February, 2020, Water Sector Trust Fund (WaterFund) hosted the delegation for a knowledge exchange visit on Kenya's Water Sector, the work of the WaterFund, and the projects financed by the WaterFund.

The delegation included Senior Government Officers from Ethiopia's Water Sector, and diplomats from the European Union (EU) and UNICEF.

The visit was facilitated by EU which has been financing Water Sector Trust Fund's Programmes since 2009, and was meant as a knowledge gathering event towards Ethiopia's One Wash National Programme (OWNP).

The Delegation appreciated Kenya's Water Sector Governance Frameworks with well delineated roles through sector institutions.

**Agnes Cheggeh**  
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