



Kakamega County Water And Sanitation Company

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Controls Team: Working Around The Clock To Ensure Clean And Safe Water For Consumers



Water Treatment Operator, Jalon Oyoo Closing the butterfly valve at Tindinyo

Working 24 hours a day is a phrase synonymous with the Controls Team which works across the clock to ensure consumers get clean and safe water.

The Controls Team was formed as a result of recommendation by the Internal Audit Unit as one of the strategies to improve service delivery.

"Water shortage in Kakamega, Shinyalu and Shitoli was caused by lack of controls. To address this challenge, the Internal Audit recommended that we set up the team as quick intervention to curb water shortage," said Ms Christabel Ashiono, the acting CEO.

She noted that with the team in place, water is properly regulated and consumers are now getting the commodity as per the

Company schedule and has reduced public outcry of water shortage.

"I appreciate this great team for their commitment, efficiency and effectiveness. I honor them for their sacrifices they make daily," she said.

She said Josephine Ikua who is a member of the Monitoring and Evaluation Committee is charged with monitoring the controls team to ensure effective and efficient service delivery and the team is up to the task.



Controls team at work

Ikua said; "We are vigilant throughout the day to ensure our consumers get clean and safe water as per the schedule."

At Tindinyo, Patrick Mutsotso, Jalon Oyoo and Hopkins Makokha all who serve as water treatment operators are always on standby mode to ensure the control programme is not delayed even by a second.

Mutsotso said their control schedule starts right when the water flows into the treatment plant from the intake at River Yala.

"We have various controls at the treatment plant to ensure the process is safe and effective," said Mutsotso. He said they are very careful so that at no point there is any substance of failure or delay to start off the programme.

He revealed that at 6.00pm they close the butterfly valve so that the main tank is filled for four hours.

"The timing of the tank to fill depends on the

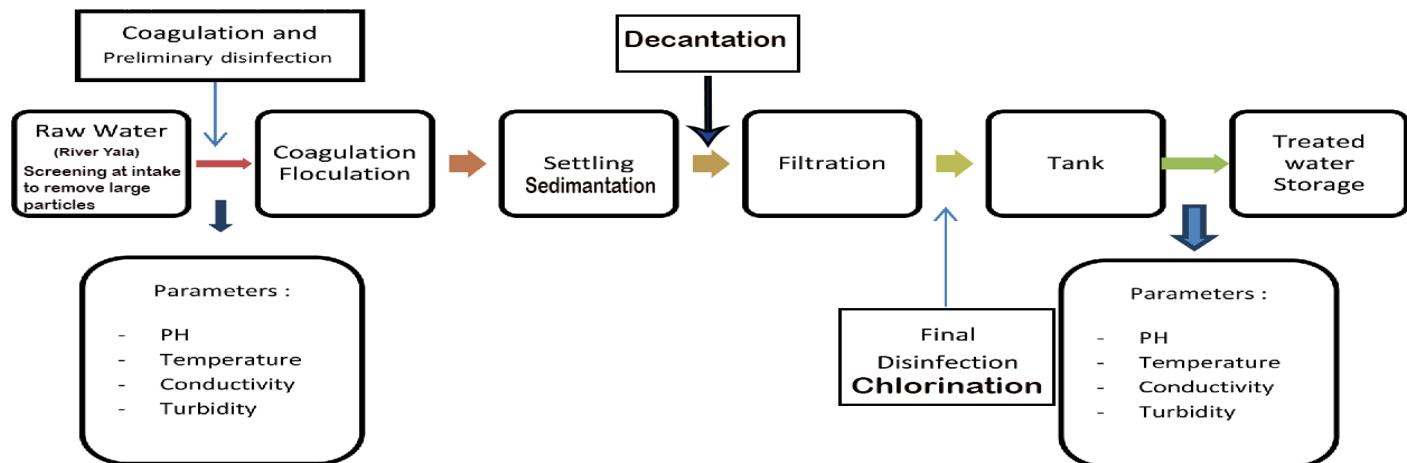
level of water and filtration process. After four hours the tank is full and we have to release the water to the main tank at Milimani and other tanks at Shitoli," he said.

He noted that they release water for four hours continuous and close the valve at 2.00am to refill the Tindinyo tank for another four hours. "We then open the valve to release water at 5.30am. Per day we release at least 12 million liters of water to consumers," he said.

At Shinyalu junction and Shitoli area Edgar Muhati and Robinson Joshua respectively are keen to ensure nothing goes amiss as they ensure smooth running of water to their targeted areas.

Alex Musya and Clinton Aswani stationed at Milimani in Kakamega town have to control water flow in three tanks at the station before supplying to residents of Kakamega town.

Aswani said they have to control water flow so that every resident gets water because if they don't do it some consumers will not get this basic commodity. "The demand for water is high in Kakamega town. We have to control water flow so that each person can get water," he said.



Water treatment process

Water treatment process goes through different stages in order to make it safe for consumption.

This entails:-

Screening

It is the first step in water treatment, it is usually done at the intake to remove large particles.

Coagulation and Flocculation

At this stage, Chemicals with a positive charge are added to the water. The positive charge of these chemicals neutralizes the negative charge of dirt and other dissolved particles in the water. When this occurs, the particles bind with the chemicals and form larger

particles, called floc. The chemical used here is Aluminum Sulfate (Alum)

Sedimentation

During this stage, floc settles to the bottom of the water basin, due to its weight.

Decantation and Filtration

Once the floc has settled to the bottom of the water basin, the clear water on top will pass through filters of varying compositions (sand, gravel, and charcoal) and pore sizes, in order to remove dissolved particles.

Chlorination/Disinfection

After the water has been filtered, a disinfectant (chlorine) is added in order to

kill any remaining parasites, bacteria, and viruses, and to protect the water from germs when it is piped to homes and businesses.

Testing

The water undergoes lab test to confirm that the water is safe for human consumption.



Water before and after treatment

The Company's Fix It Team

Water pipe bursts and water spillage especially during road construction cause water and revenue loss for the Company and deny consumers water. However, the artisan team is always on high alert to fix the problem and restore water connectivity.

For instance, Amalemba and Maraba areas have experienced water shortage due to road construction which destroyed several water pipes.

"Contractors are very stubborn they do not inform us during road construction so that we can get a way of keeping our pipes safe. They destroy water pipes without informing us and at the end our consumers lack water," said Idd Osundwa who is the area manager for Kakamega.

He said it is costly to restore the water pipes but affirmed that the field team is committed to ensure the process of restoring the

water pipes is done within the shortest time possible.

"We have a very effective team which is always alert. They do a perfect work to reconnect water in affected areas," he said.

He noted that were it not for the challenge



KACWASCO team fixing pipes at Amalemba Estate

of getting the required pipes, the team could have fixed the problem at Amalemba the same day. "We have competent manpower but sometimes getting the pipes is a challenge causing delays in fixing the problem," he said.

He revealed that as part of getting a lasting solution, the Company intends to start using high density pressure pipes that cannot be easily destroyed during construction.

The Company acting CEO Ms Christabel Ashiono appreciated the whole team of artisans for their dedication at work to ensure they restore water connectivity whenever there is pipe bursts and spillage.

"I thank the whole team of artisans working across the County to fix this challenge. Without them the Company can survive or grow," she said.



Treatment Operator: How We Ensure Maji Safi, Maisha Bora

For the Company to live to its philosophy ‘maji safi, maisha bora’ a dedicated team is stationed at Tindinyo Water Treatment Plant to ensure this is achieved effectively.

Patrick Mutsotso, a water treatment operator at the Station said they are committed to ensuring that the over 500,000 water consumers get clean and safe water in their taps.

He said they have a duty to ensure that every drop that reaches the consumers meets the standards required including chlorine levels.

He noted that this helps the water treatment operators to regulate the

amount of chlorine applied to avoid overdose which is harmful for consumption.

“At the water intake at Tindinyo treatment plant a coagulant (a chemical



Patrick Mutsotso explaining the Flocculation process

compound) is added to water to bind together suspended particles and improve its ability to settle. Aluminum Sulfate is mostly used at this stage,” said Mutsotso.

He confirmed that before adding any form of coagulant to the water, a test known as a jar test or trial

and error test is done. The purpose of this test is to determine the minimum coagulant required to achieve the desired water quality.

“A flocculator machine plays crucial role in knowing the right amount of Aluminum Sulfate that would help in ensuring that the unwanted particles are bound to allow water to settle faster,” he said.

He added: “The machine has six jars each measuring 1000ml and paddles. We fill each jar with raw water from the collection point and add known but var-

ied amount of chemicals stir and allow sufficient amount of time for water to settle,”

The lowest dose of chemicals that provides satisfactory settling is the dose used to treat the water.

Ph, turbidity (the quality of being cloudy, opaque or thick with suspended matter) and color weighed against accepted standard values are the variables that guide the proportion of coagulant applied to a given volume of water.

13000m³ of water is coagulated at any given time and the procedure is repeated from time to time due to varying quality of water.



Dickson Jimode (left) and Simon Tirop during their routine rounds

“We have cases of stuck meter which results into estimated water bills. Our work is to service such meters so that they can function normally,” said Jimode.

He said they always read water meters between 10th and 20th of every month to facilitate generation of water bills on time.

And if one fails to pay for the water bills, the team is mandated to disconnect water.

“We have several options to disconnect water including gate valve closed, plugging, sealing and disconnection from the main line,” said Tirop.

Reading Water Meters Is Always Our Pleasure

With their tools of work in their hands ready for work, meter readers play critical role in meter management to enhance revenue collection for the Company.

The Company has devised a new strategy dubbed total meter management to enable meter readers to read the meters, service the meters, advice consumers on arrears and handle all matters related to metering. “They are also tasked with disconnecting

water for consumers who have arrears. Total meter management will enable them to handle matters related to metering effectively so that as a Company we don’t lose revenue,” said Ms Christabel Ashiono, the acting CEO.

We meet Simon Tirop and Dickson Jimode while servicing a water meter at Koromatangi in Kakamega town. For the duo, meter reading and service is their daily routine.

Honoring the Promise

The Company has started paying suppliers their dues as promised by the acting CEO Ms Christabel Ashiono during a consultative meeting with them.

The CEO revealed that the Company has honored the promise as per the payment plan as agreed upon by the suppliers.

"We have started paying our suppliers. We have a debt management plan that will ensure we clear with all debts the Company owes them," she said.

She affirmed that the Company is committed to ensuring it clears all debts in the shortest time possible

During the meeting with suppliers, she said a resource mobilization strategy is in place to manage the targets. She recognized the suppliers as key stakeholders for the growth of the Company as they play an integral part in the operations and maintenance services of the Company.

She told the suppliers that the Company is ready and willing to continue working with them promising a bright future.

"We value you as our key stakeholders and I urge you to continue working with us so that we achieve our desire of every resident of Kakamega County getting clean and safe water," the CEO said.

Ikua: The Iron Lady Behind Effective Controls Team



Josephine Ikua, In-charge Controls Team

For Josephine Ikua, daily early morning greetings from the Company acting CEO Madam Christabel Ashiono motivates her to go about her day to day duties as she strives to ensure water consumers get the commodity as per the Company schedule.

Ikua who is the Monitoring and Evaluation Committee member charged with monitoring of controls team running from Tindinyo, Shinyalu, Shitoli and Milimani in Kakamega town ensures effective service delivery to enable consumers get water.

"I have to ensure there is proper flow of water as per our schedule. We are committed to doing our work. I am grateful to our CEO for her daily motivation and appreciation as this has made our work easier and enjoyable," said Ikua.

She noted that her team works around the clock to ensure everything is in order to avoid spillage and delays for consumers to get water.

"The team is always alert 24 hours a day on a daily basis. We love our work and we want to

be part of the success of our Company," she said.

Ikua said to make communication easier and effective, her team has formed a WhatsApp group which enable them to give and get updates from every control point.

"We are always online to ensure things run as per our plans. This new model of working has enabled us to reduce complaints from consumers and also avoid losses," she said.

She affirmed that the motivation she gets from her boss makes her feel always willing to strive to do her best and even more for the Company.

She lauded the CEO for her open door policy which she said has created a conducive working environment for staff and even consumers are satisfied with services.

"Unlike before when we used to have tension when the CEO calls, we are free to share with the CEO and she gives feedback. She is free with every staff and consumers. This has made our work easier and comfortable," Ikua said.

Her team is responsible of controlling water flow from Tindinyo treatment plant to the consumer's tap.



Josephine Ikua (second left) with Tindinyo Control Team Members