

GOVERNMENT OF NAIROBI CITY COUNTY



THE NAIROBI CITY COUNTY ASSEMBLY

OFFICE OF THE CLERK

5TH SESSION

NBI CA. PLC. 2017 / (042)

7th June, 2017

PAPER LAID

Pursuant to Standing Order 180 (6) I beg to lay the following Paper on the Table of the Assembly, today Wednesday 7th June, 2017.

THE REPORT OF THE SECTORAL COMMITTEE ON WATER AND SANITATION ON THE INSPECTION VISIT TO NORTHERN WATER COLLECTOR TUNNEL PROJECT, NGETHU TREATMENT WORKS AND NDAKAINI DAM HELD IN MURANG'A FROM 17TH -18TH FEBRUARY, 2017

(Chairperson, sectoral Committee on Water and Sanitation)

Copies to:
The Speaker
The Clerk
Hansard Editor
Hansard Reporters
The Press

Approved.
Hon Speaker
[Signature]
7/6/17

T&J/RM/016/2017)

GOVERNMENT OF NAIROBI CITY COUNTY



NAIROBI CITY COUNTY ASSEMBLY

OFFICE OF THE CLERK

(5TH SESSION)

Notice of motion
given by Hon. Thug.
on Wed 7/6/17
A. Omondi
P/C A/C
7/6/17

NOTICE OF MOTION – (Chairperson, Sectoral Committee on Water and Sanitation)

Hon. Speaker, I beg to give notice of the following motion:-

THAT, this Assembly adopts THE REPORT OF THE SECTORAL COMMITTEE ON WATER AND SANITATION ON THE INSPECTION VISIT TO NORTHERN WATER COLLECTOR TUNNEL PROJECT, NGETHU TREATMENT WORKS AND NDAKAINI DAM HELD IN MURANG'A FROM 17TH-18TH FEBRUARY, 2017, laid on the Table of the Assembly today Wednesday, 7th June, 2017

(Chairperson, Sectoral Committee on Water and Sanitation)

Approved.
Hon Speaker
[Signature]
7/6/17

P/CA Lx.

Koranyi deal.

A. Omondi
P/CA/CJ
7/6/17



NAIROBI CITY COUNTY ASSEMBLY

FIRST ASSEMBLY – FIFTH SESSION

**REPORT OF THE COMMITTEE ON WATER AND SANITATION ON
INSPECTION VISIT TO NORTHERN WATER COLLECTOR TUNNEL
PROJECT, NGETHU TREATMENT WORKS AND NDAKAINI DAM HELD
IN MURANG'A FROM 17TH -18TH FEBRUARY, 2017.**

Clerk's Chambers,
CITY HALL,
NAIROBI.

MARCH, 2017

*Paper loaded by
Hon. Thugoi on
Wed 7/6/17
MAYY
PLC/CD
7/6/17*

PREFACE

The Committee on Water and Sanitation undertook an inspection visit to the Northern Water Collector Tunnel Project and Ndakaini Dam and Ngethu Treatment Works in Murang'a. The main objective was to enable Members assess the situation of Ndakaini Dam and Ngethu Treatment Works and familiarize themselves with the ongoing construction works of the Northern Water Collector Tunnel project.

ACKNOWLEDGEMENT

The Members extends appreciation to offices of the Speaker and the Clerk of the Nairobi City County Assembly for incessant support that facilitated the inspection visit to Ndakaini Dam, Ngethu Treatment Works and Northern Water Collector Tunnel Project.

COMMITTEE MEMBERSHIP

The Committee on Water and Sanitation comprises the following members:

1. Hon. Alex O. Otieno, MCA - Chairperson
2. Hon. Kenneth Thugi, MCA - Deputy Chairperson
3. Hon. Michael Ogada, MCA
4. Hon. Herman Azangu, MCA
5. Hon. Robert Mbatia, MCA
6. Hon. Hashim Kamau, MCA
7. Hon. David Kairu, MCA
8. Hon. Pius Otieno, MCA
9. Hon. Celestine Ongere, MCA
10. Hon. Hawa Dafala, MCA
11. Hon. Maurice Akuk, MCA
12. Hon. Oscar Lore, MCA
13. Hon. Victoria Alali, MCA
14. Hon. Monica Ndegwa, MCA
15. Hon. Nancy Mwaura, MCA
16. Hon. Peter Wanyoike, MCA
17. Hon. Caroline Muga, MCA

Hon. Members,

On behalf of the Committee on Water and Sanitation, it is my pleasant duty and honor, to present the Committee's Report on the retreat held in Naivasha.

SIGNATURE.....

DATE.....

HON. ALEX OUDA OTIENO, MCA

(CHAIRPERSON)

1.0 NORTHERN WATER COLLECTOR TUNNEL PROJECT

The Committee learnt from Athi Water Services Board that the present water demand for Nairobi was 760,000m³/day against an installed production capacity of 550,000m³/day. In order to meet the water deficit and ensure water security, Athi Water Services Board, in 2012 developed a Water Sources Master Plan to meet water demand for Nairobi and satellite towns up to the year 2035. The Master Plan identified an implementation schedule for new water sources in five phases. AWSB is in the process of implementing phase 2 of the master plan (4th Nairobi water supply programme).

The Committee was informed that so far 78 licenses/permits had been issued in the ongoing NWCT Project and the other remaining 4 were to be sought at a time when the specific works commenced.

As part of giving back to the community, students from Murang'a University and other institutions are being offered internship programmes. Upgrading of hospitals is also being done as a result of the ongoing project.

Houses that were fully equipped and built for resident engineers were to be given to the County Government of Murang'a upon completion of the project to serve as clinics.

The status of the said program is as follows;

a) Northern Water Collector Tunnel Phase 1

The Scheme, under Phase 1, is aimed to divert raw water from Maragua, Gikigie and Irati Rivers by means of weir control intakes and convey the intercepted raw water through an 11.8KM long tunnel with 3.2 M diameter to Ndakaini/Thika Dam Reservoir. This will increase water to Nairobi by 140,000m³/day.

Progress

The Committee was informed that the NWCT works commenced in February 2015 and are expected to be complete by June 2018. Works are 20% complete whereby the Contractor has mobilized 100% of the equipment and drilled 400m of tunnel in Mukomboki, Kaanja and Gikigie. Early completion of Irati River shaft and Intake

has been prioritized so that residents start benefitting as tunneling upstream continues.

The Irati intake has been designed for a diversion capacity of 2m³/sec subject to availability of water after downward requirements.

1.2 CONSTRUCTION OF KIGORO WATER TREATMENT PLANT

The Committee learnt that the Kigoro Water Treatment Plant was being built to treat additional water coming into Thika Dam as a result of the construction of the Northern Water Collector Tunnel Phase 1. Additional 140,000m³/day water will be treated and supplied to residents in Nairobi.

The works at Kigoro commenced in May 2016 and the plant is expected to be complete by May 2018. Physical progress is at 15% and has been affected by a court stoppage order due to succession issues. Athi Services Water Board has engaged the National Land Commission to assist in acquisition of the land and the NLC is in the final stages of acquisition of the said land.

1.2.1 CONSTRUCTION OF RAW AND TREATED WATER TRANSMISSION PIPELINES

The Members were informed that this project aimed at conveying the raw water from Thika Dam to Kigoro Water Treatment Plant and treated water from Kigoro Water Treatment plant to Gigiri reservoirs and this will be transferring additional 140,000m³/day (1.6m³/s) of water to Nairobi upon completion.

It was noted that the contract of construction of raw and treated water transmission pipelines commenced in October 2016 and its completion expected in April 2019. The contractor had began mobilization activities.

1.2.2 NAIROBI CITY WATER DISTRIBUTION NETWORK MODIFICATION PROJECT

The Committee was told that this project was meant to increase the capacity of the existing distribution network in the City of Nairobi and construct secondary networks to improve water supply in poor urban areas.

The Modification project consists of three investment lots as follows;

- a) Construction of Kiambu – Embakasi Water Transmission Pipeline – Lot 1

- b) Construction of Kabete – Karen Water Transmission Pipeline Lot 2
- c) Extension of water and sewer network infrastructure to Eastern and Western Nairobi Peri-Urban areas –Lot 3

1.2.3 MURANG'A COUNTY COMMUNITY PROJECTS

The Community learnt that Community water projects with a total cost of Kshs. 2.7 Billion (Government of Kenya funding with support from World Bank and Belgium Government) are being implemented to benefit the local residents as part of the ongoing 4th Nairobi Water Supply Program

1.3 THIKA DAM (NDAKAINI DAM)

The Committee visited Thika Dam and witnessed the alarming reduced water levels. Members were informed by the Production Manager of Nairobi City Water and Sewerage Company Limited that the dam was at 35% capacity and was projected to reduce to 31% by the end of February and 23% by end of March in the worst case scenario (assuming there will be no rains during that period)

The Production Manager stated that both Thika Dam and Ngethu Treatment Works were referred as a one supply system that supplied 80% of water to Nairobi County. At Ngethu, between 450,000 - 460,000m³/day of water was being treated and this is 100% capacity utilization.

It was learnt that the volume of water in the Rivers recharging Thika Dam such as the Chania, had significantly gone down, a scenario that compelled the drawing of water from the dam that is supposed to serve as an augmentation reservoir that is only designed to draw water when Rivers dry up.

1.4 NGETHU TREATMENT WORKS

The Committee toured the Ngethu Treatment Works and established that it had three water works that worked independently as follows;

- a) Phase one with design capacity of 61,000m³
- b) Phase two with design capacity of 157,000m³
- c) Phase three with design capacity of 222,000m³

The Members were told that Sodium Carbonate, Aluminium Sulphate and aluminium chloride were chemicals used to treat water. It was noted that Aluminium Chloride was comparatively costly and was mainly used during rainy seasons when water was very dirty and murky.

2.0 RECOMMENDATIONS

- a) There is need to sensitize residents on the need to conserve water, that remains a scarce commodity.
- b) The Water Catchment areas should be protected for posterity and as envisaged in the National Water Act, 2016
- c) The ongoing Northern Water Collector Tunnel Project should absorb more interns from engineering, sociology and other disciplines for purposes of learning. As such, the interns from outside the jurisdiction of Murang'a County should also be considered for such internships.
- d) More partnership and collaborations between the National and County Governments come in handy to aid in the construction of additional dams to manage the water deficit experienced in the City. This is because the ongoing NWCT Project will still have a deficit upon its completion.