

Reaching the marginalized
with safely managed
sanitation through the
provision of sewerage
systems: The case of
Ashaiman Sewerage System

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About GAMA Sanitation and Water Project

- The GAMA SWP is a government-led project being coordinated by the Project Coordinating Unit of the Ministry of Sanitation and Water Resources and implemented by MMAs in GAMA & GKMA.
- The project is financed by the World Bank and is being implemented in Greater Accra and Ashanti Metropolitan Areas, specifically in 24 MMAs in Accra and 8 MMAs in Kumasi.
- The project targets low-income urban communities – households, institutions
- Main components are
 - Provision of household and institutional toilets
 - Extension of household piped water connections
 - Improvement in environmental sanitation services
 - Institutional and sector capacity building

Major Project Achievements

Over 59,000 household toilets provided since 2015

About 598 modern and gender-friendly school toilets provided

Two (2) sewerage systems constructed for low-income communities at Ashaiman and Bankuman

More than 15,000 low-income households connected to GWCL pipelines

Priority drainage systems expanded to minimize flood risks in parts of Accra

MMDA capacities built through staff training on various topics and provision of logistics for project implementation



Characteristics of Ashaiman New Town

- Project Area – Ashaiman New Town & TDC Quarters in AshMA
- The community lies in the Moni-Obaanye electoral area, AshMA (1.27 km²), bounded by Lebanon & Community 22
- Beneficiary Population – 5,455 HHs (24,300)
- 83% compound house type (>50% dwell in single rooms, >33% dwell in chamber and hall)
- Unplanned community layout, untarred roads
- Inadequate drainage, natural gullies & earth drains
- Occasional flooding after heavy down pours

Pre-Intervention Sanitation Situation

- 66% of HHs rely exclusively on public toilets
- 33% use shared compound toilets, dedicated toilet facilities & WCs/septic
- < 1% practice open defecation
- 98% rely on GWCL piped coverage for water supply
- No sewer network & treatment facility exists in Ashaiman New Town
- Old damaged sewers & manholes in the TDC Quarters area, two (2) old existing ponds



Plate 7.3: Evidence of poor drainage (lack of stormwater and sullage drains) situation in some parts of the community



Plate 4.9: Bathroom wastewater disposal methods into earth drains

Justification of Project Intervention

Project Criteria

- Low-income urban community
- Poor/Limited access to improved sanitation
- Densely populated community
- Suitable topography for a gravity flow system

Environmental & Health Risks

- Minimize & decrease pollution risks (e.g. discharge of raw sewage) to surface water and surface drainage systems
- Reduce public health risks arising from uncontrolled wastewater discharges

Reuse

- Reuse of bio-solids & demand for bio-solids by farmers in the catchment area
- Reuse of treated effluent for irrigation & aquatic farming

Brief Description of Sewerage System



- Constructed a **new simplified sewerage network** for Ashaiman New Town
 - 3.71 km trunk sewer & 45.05km condominal sewer network
- Rehabilitated existing sewerage network at TDC Quarters
- Constructed a **new Wastewater treatment plant** (1,800 m³/d) to serve about 5,455 HHs (24,300 pop.)
- Rehabilitated two (2) existing ponds
- Connected to date - 888 HHs (4,440 pop.)

Pics of Works and Aerial View of Ashaiman Sewerage Treatment Plant



Animation of Ashaiman WWTP

Community Engagement and Sensitization



- **Conducted several durbars** (Pre-, During and Post) at three (3) different locations - Ashaiman Newtown and Roman Down.
- **Consultations – AshMA, Assembly Members, Landlords, Traditional leaders** such Chiefs, Queenmothers, GWCL, ECG, etc
- **Engaged Religious Groups** and leaders, business groups, trade groups incl. Pastors, Imams, Market Women Association, Transport Unions, Hoteliers Associations etc
- **Plant Tour** for community members



Governance

- Commissioning of system – August 2023
- Defects Liability Period – December 2023
- Key Implementation stakeholders: MSWR & ASHMA
- Local Govt Act, 2016 (Act 936) empowers AshMA to exercise and manage rights over the system
- Project has drafted and reviewed an implementation framework for sewerage operations
- AshMA regulate & supervise operations of the system and encourage household connections
- AshMA EHSU is be focal dept
 - Mandatory connection of properties, banning use of HH toilets as public toilets, penalty for default in payment of user fees etc

Operation & Management Model



Local Private Operator (LPO)

Responsible for operating and maintaining the assets and enhancing delivery of services

Prepare MoU/Contract with LPO



Agree on Tariff with AshMA

User tariffs have been determined.

Stakeholder Engagement & consensus ongoing.

Present tariff proposals to General Assembly



Mode of bill payment

Installation of a billing software (User fees & Connection fees)

Avoid human interference

Cost & Affordability to beneficiaries

CAPEX/OPEX

- CAPEX - covered by the WB/GoG
- OPEX – recurring cost for ongoing use of the asset.

Economic Status

- Business & Trading – 62% of population
- Formal Employment – 24.8%
- Avg daily income – GHC 17 for high income among the LIUCs

Users

- 888 out of >5,000 potential users connected
- Connection fees (One-off)
Property owners to bear full cost (≥ 800 ghc)
- User fees - (YTBD)
- <1 ghc/day

Ability/Affordability

- HH cost /attendance (Public Toilet) – 7 to 10ghc/day
- Strictly Pay As You use
- HH cost/attendance (Sewerage) – 5ghc/day

Making the Difference



- Community acceptance of the system
- Facilitate behavioral change
- Cost per usage is **cheaper** compared to use of public toilets
- **Convenience** – Easy access to improved sanitation, no desludging & no queueing
- Safely managed sludge treatment & disposal
- **Reuse** of sludge & effluent - (Compost, irrigation, fish farming)
- Generation of biogas – (Energy)

THANK YOU FOR YOUR ATTENTION

