

GOVERNMENT OF GHANA



# ACCRA METROPOLITAN ASSEMBLY

## Ablekuma Central Sub-Metropolitan Council



# FOM-H

(FACILITY OPERATION AND MAINTENANCE HANDBOOK)

*for*

**PUBLIC TOILETS, DRAINS, REFUSE SKIPS AND SCHOOL TOILETS**

Nmenmetee Electoral Area  
Sabon Zongo Community Development Committee

DECEMBER, 2008

## UN-HABITAT – WATER FOR AFRICAN CITIES II (WAC II)

The Water for African Cities (WAC) is a comprehensive initiative by UN-HABITAT to support local and national governments and their partners to effectively manage the growing urban water crisis and also protect the threatened water resources and aquatic ecosystems from the increasing volumes of point and non-point sources of pollution from urban areas. Interventions focus on low income communities of cities where the environmental burden of poor water and environmental sanitation services is so acute.

The overall objective of the piloting activities under WAC II is to increase access to water supply and sanitation facilities and services in low income urban settlements in Ghana including managing the interventions provided in an efficient and sustainable manner. Sabon-Zongo in Accra is one of the beneficiary communities selected for the pilot project.

The WAC II project was divided into seven (7) components. The table below shows the various components and the Executing Partners for each.

COMPONENT	DESCRIPTION	EXECUTING PARTNER
<b>1</b>	Entails setting up a mechanism for the community to be involved in decision-making and -taking to improve and manage water supply and sanitation facilities	WaterAid Ghana
<b>2</b>	Provides services for the design and construction supervision of sanitation facilities (i.e. public toilets, drains and refuse skips and holding bay)	WaterAid Ghana
<b>3</b>	Involves the provision of technical services for improving water supply facilities and services to the community	Ghana Water Company Limited
<b>4</b>	Supports putting in place effective operation and maintenance and management mechanisms to minimise physical losses in water supply services	Ghana Water Company Limited
<b>5</b>	Promotes quality and values based water, sanitation and hygiene education in targeted schools	Ghana Education Service
<b>6</b>	Contributes to advocacy and awareness creation	Ghana Water Company Limited
<b>7</b>	Covers improving management of the urban catchment around the Weija Reservoir	Water Resource Commission

The project is managed by a Project Steering Committee (PSC) comprising key sector actors under the oversight of the Ministry of Water Resources, Works and Housing. Water Aid-Ghana (WAG) is the executing partner for Components 1 and 2. WasteCare Associates was commissioned by WAG to provide technical assistance in carrying out activities specific to Component 2 in Sabon Zongo, including the preparation of this Facility Operation and Maintenance Handbook (FOM-H).

## **FOM-H CONTENTS**

This FOM-H contains information for O&M of the following facilities:

- 20-Seater WC toilet, Septic Tank, Toll booth, Solid Waste Holding Bay, Paving of walkways, Landscaping and Fencing of St. Thomas Sanitary Site;
- 2 No. 8-Seater WC Toilets and Septic Tanks for Laterbiokoshie 2 & 3 and Da-Awatul Primary Schools;
- Selected drains for sullage and storm water conveyance

An important way of sustaining O&M management is to involve community members. In Sabon Zongo, this is to be achieved through the active participation of the CDC with support from the Ablekuma Central Sub-Metropolitan Council and its relevant units especially the Environmental Health Unit (EHU) and Cleansing Unit.

This Facility Operations and Maintenance Handbook (FOM-H) provides an operator-friendly information to assist all stakeholders involved in the oversight and management of the facilities.

**20 SEATER WC TOILET**

This section gives **3** basic details needed for effective O&M of public toilets:







- ☞ Daily Routine Cleansing
- ☞ Periodic Cleansing and Scheduling
- ☞ Effectively Operating Facilities (User Guide)

And **1** important item needed to carry out the first two guides

- ☞ Cleansing Agents for Different Finishes




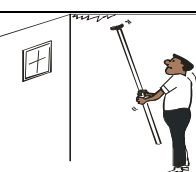
**Step 1: Daily Routine Cleansing**

The checklist below should be followed:



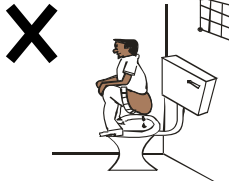

1.	PICK UP LITTER AND SWEEP TOILET ROOMS	
2.	CLEAN AND SANITIZE WC SUITES	
3.	CLEAN AND SANITIZE BASINS	
4.	SPOT CLEAN TILED WALLS & FIXTURES	
5.	WET-MOP FLOORS	
6.	WEEKLY INSPECTION BY SUB-METRO CLEANSING OFFICER (TANKASE)	

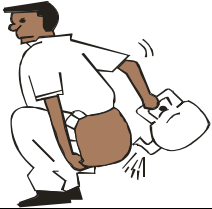
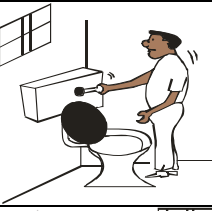

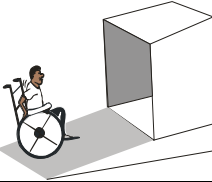
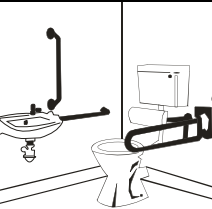


## Step 2: Periodic Cleansing Schedule

The table below gives the main activities and the recommended times for cleaning:

ITEM	PERIODIC CLEANING SCHEDULE	FREQUENCY	
Floor	Scrub manually to remove stubborn stains and spots	2 weeks	
Walls	Hand scrub tiles to maintain shine and colour of grouting	Weekly	
Basin	Scrub to remove stains underneath washing bowl and check leakages	Monthly	
Doors & Windows	Remove cobwebs	Monthly	

## Step 3: User Guide for Effective Operations

PAY THE RECOMMENDED TOLL AT THE BOOTH		
ALWAYS SIT ON THE TOILET BOWL. DO NOT SQUAT		
INCASE OF SQUATTING BOWLS, DO AIM PROPERLY AT THE SQUAT HOLE		

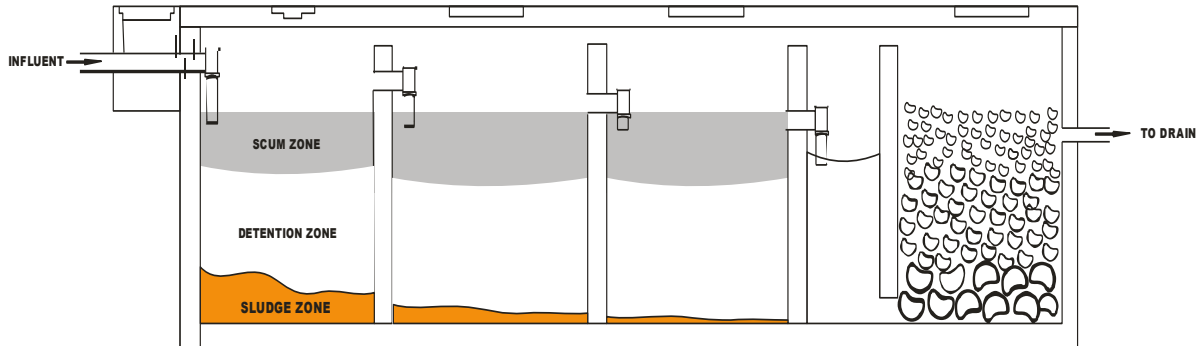
<p>ANAL CLEANSING SHOULD BE PERFORMED CAREFULLY TO PREVENT SPILLING OF WATER ON THE FLOOR</p>	
<p>FLUSH THE TOILET THOROUGHLY AFTER USE BY GENTLY TURNING THE FLUSH HANDLE</p>	
<p>WASH YOUR HANDS THOROUGHLY WITH SOAP IN THE HANDWASHING BASIN AFTER USING THE TOILET</p>	
<p><b>FACILITY FOR THE DISABLED</b></p>	
<p>USE RAMP PROVIDED WHEN ENTERING THE TOILET</p>	
<p>SPECIAL FIXTURES TO AID USE OF FACILITY</p>	
<p>WITH THE HELP OF SUPPORT RAILS PROVIDED LIFT YOURSELF UP FROM THE CHAIR AND CAREFULLY SIT ON TOILET BOWL</p>	
<p>WASH HANDS IN BASIN AFTER USING THE TOILET</p>	

### Cleaning Agents for Different Finishes

ITEM	ACTIVITY	DESCRIPTION
1	Wall/Floor (ceramic tiles and terrazzo)	Use neutral-based cleaners or disinfectants.
2	Sanitary Wares	Use disinfectant cleaners
3	Plastic/PVC materials	Use neutral based cleaners
4	Toilet Bowls	Use disinfectant or mild abrasive liquid cleaners

## SEPTIC TANK

The septic tank receives sewage (excreta) from the public toilet. The sewage settles in the tank and forms layers. Bacteria use the organic matter as food. It takes sometime for the tank to fill and the content should be emptied from time to time.



### Odours (Smell)

Foul smell from the septic tank is released through vents. In order not to kill bacteria and increase foul smell, use only recommended cleaning agents as above.

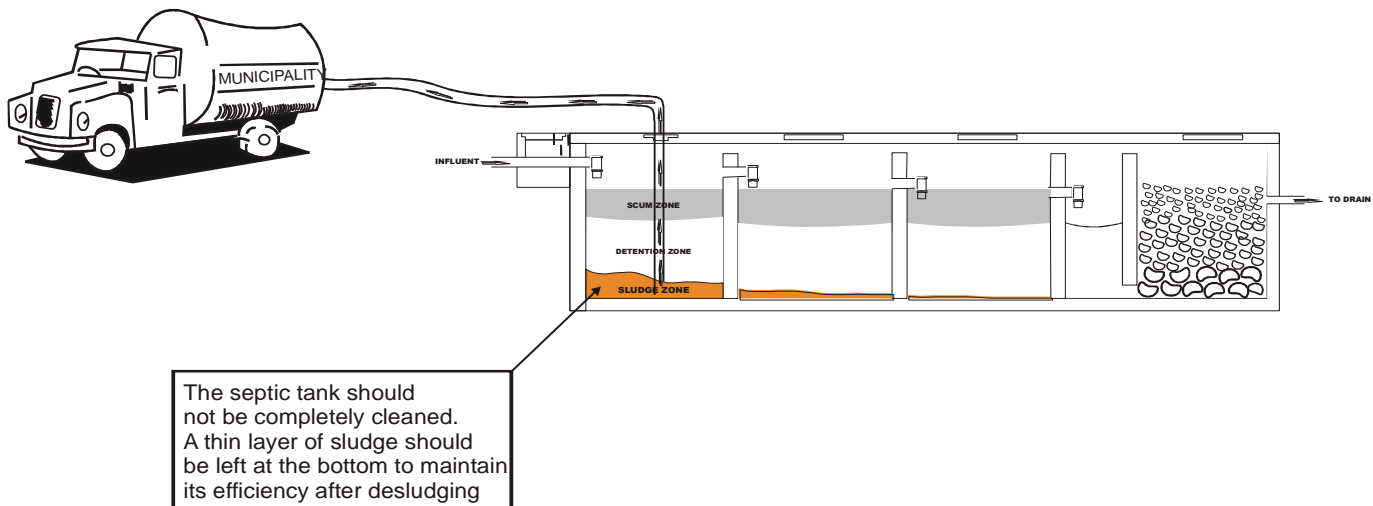
### Mosquito Control

An incorrectly maintained septic system is the perfect breeding place for mosquitoes. This can be prevented by;

- Covering all vents with plastic mosquito net
- Ensuring cover-slabs on chambers are sealed properly to prevent mosquitoes from entering.

### Desludging



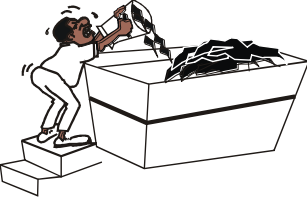
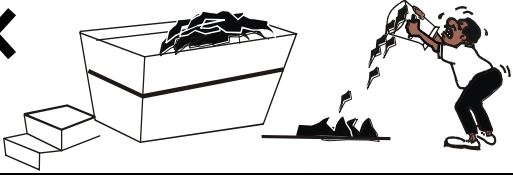

Inspect the tank every 3 months to check the depth of content (sludge). Have the tank emptied to remove sludge when full (if operated properly this can take more than 1 year)



## REFUSE COLLECTION AND DISPOSAL

Proper refuse collection, transfer/transport and safe disposal is important to maintaining good hygiene and clean environment.

Steps for proper refuse storage by households, collection and communal storage.

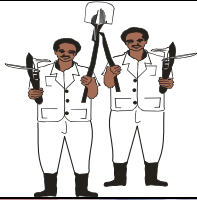



<p>COMMUNITY MEMBERS SHOULD BE EDUCATED ON THE PROPER STORAGE OF HOUSEHOLD REFUSE IN SANITARY RECEPTACLES (BUCKETS, BOWLS, SACKS, ETC.)</p>	
<p>ENCOURAGE HOUSE TO HOUSE REFUSE COLLECTION (E.G. USE OF TRICYCLES)</p>	
<p>CAREFULLY CLIMB STAIRS PROVIDED AND PROPERLY DUMP REFUSE INTO CONTAINER</p>	<p>✓</p> 
<p>DO NOT DUMP REFUSE ON THE GROUND</p>	<p>✗</p> 
<p>PROPER ARRANGEMENTS SHOULD BE MADE FOR EMPTYING THE CONTAINERS TO PREVENT OVER SPILLING (e.g. every 2-3 days)</p>	



# FOM-H 4 DRAIN CLEANSING

Drains should always be clean to maintain good flow of rainwater and sullage (water from bathrooms and kitchens).

Communal and Household Activities for Maintenance of Drains

<p>ENGAGE GANG TO CARRY OUT PERIODIC CLEANSING OF DRAINS</p>	
<p>ORGANIZE PERIODIC CLEAN-UP EXERCISES TO CLEAN UP THE DRAINS ESPECIALLY BEFORE THE RAINY SEASON</p>	
<p>DO NOT DUMP REFUSE, HUMAN EXCRETA AND ANIMAL WASTE INTO DRAINS</p>	<p>✘</p> 
<p>ENSURE THAT DRAINS ARE ALWAYS KEPT CLEAN. EVERY HOUSEHOLD IS RESPONSIBLE FOR CLEANING THE SECTION OF DRAIN IN FRONT OF THEIR HOUSES</p>	<p>✔</p> 

## PERSONNEL REQUIREMENT AND SCHEDULE FOR O&M

This section indicates the personnel and their roles in O&M of facilities.

Personnel	No. Required	Role
Caretaker (2 shifts per day)	2	<ol style="list-style-type: none"> <li>1. Keep good record of daily revenue from use of toilet and dumping of refuse</li> <li>2. Supervise labourers to carry out their duties</li> <li>3. Keep inventory of all equipments and supplies</li> <li>4. Report all faults to CDC for remedy</li> </ol>
Labourers (for both public and school toilets)	2	<ol style="list-style-type: none"> <li>1. Carryout daily and periodic cleansing of public and school toilet facilities</li> <li>2. Ensure general cleanliness at the sanitary site</li> </ol>
Labourers (for skips)	2	<ol style="list-style-type: none"> <li>1. Ensure refuse are properly dumped into containers</li> <li>2. Ensure general cleanliness at the sanitary site</li> </ol>
AS AND WHEN REQUIRED		
Plumber	1	<ol style="list-style-type: none"> <li>1. Carry out repairs on all plumbing fixtures</li> </ol>
Pump Repairer	1	<ol style="list-style-type: none"> <li>1. Carry out routine servicing and repairs on pump fixed on borehole</li> </ol>
Carpenter	1	<ol style="list-style-type: none"> <li>1. Carry out repairs on all carpentry fixtures</li> </ol>
Electrician	1	<ol style="list-style-type: none"> <li>1. Carry out repairs on all electrical fixtures</li> </ol>
Mason	1	<ol style="list-style-type: none"> <li>1. Carry out all masonry repairs.</li> </ol>

### **St. Thomas (Amper) Sanitary Site**

It is recommended that the sanitary site be operational for 24 hours, thus 2 shifts of 12 hours each.

### **School Toilet Facility**

The school health committee will be responsible for ensuring that the toilet and urinal facilities are kept clean at all times.













### **Drains**




A drain cleansing gang will be hired to carry out periodic cleansing of drains. This will be complemented by periodic communal labour activities.

## Equipment and Supplies List for Operations

ITEM	DESCRIPTION	No.	Present Unit Cost (GH ¢)	Future Unit Cost (GH ¢)	Amount/year (GH ¢)
<b>20 SEATER WC TOILET</b>					
1	Service tray or cart or wheel barrows 	1 No./3 years	60.00		60.00
3	Concentrated Disinfectant 	2 Gallons/year	15.00		30.00
5	Toilet bowl scrub and holder 	20 No./2 years	4.00		80.00
6	Broom 	2 No./ 6month	3.00		12.00
7	Mop/bucket 	2 No./quarter	4.00		32.00
8	Hand Towels 	24 No./Year	2.00		48.00
9	Toilet paper (Soft Tissue-paper)-Box of 10 rolls 	60 boxes/month	3.00		2,160.00
10	Soap 	2 No./day	1.50		1,095.00
11	Pair of Hand Gloves 	2 Pairs/year	3.00		6.00
12	Nose masks	4 No./month	1.50		48.00

## ANNUAL OPERATIONS AND MAINTENANCE COST

					
13	Wellington boots 	2 No./3years	10.00		3.50
14	Overall 	2 No./year	15.00		30.00
<b>SEPTIC TANK</b>					
15	Desludging 	2 times/ year	120.00		240.00
<b>REFUSE COLLECTION</b>					
16	Pair of Hand Gloves 	1 No./year	3.00		3.00
17	Nose masks 	1 No./month	1.00		12.00
18	Wellington boots 	1 No./3years	8.00		8.00
19	Emptying Refuse Container 	Twice/Week	30.00		3,120
<b>DRAINS</b>					
20	Service tray or cart or wheel barrows 	2 No.	60.00		120.00
21	Overall 	2 No.	15.00		30.00
22	Wellington boots 	2 No.	8.00		16.00
23	Pair of Hand Gloves 	2 Pairs	3.00		6.00

24	Handfork/Brushes 	2 No.	12.00		24.00
<b>UTILITY BILLS</b>					
20	Electricity Bill 	1/month	10.00		120.00
21	Water Bill 	1/month	40.00		480.00
<b>REMUNERATION FOR CARETAKERS AND LABOURERS</b>					
22	2 Caretakers	Daily	3.00		1,095.00
23	4 Labourers	Daily	3.00		2,190.00
24	Gang of two (for drain cleansing)	Daily	3.00		1,095.00
<b>TOTAL ANNUAL OPERATION COST</b>					<b>12,163.50</b>

## PERFORMANCE MONITORING TOOLS

The following forms have been designed to serve as performance monitoring tools for the facilities provided.

FORM 1:

BASIC INFORMATION ON SCHOOL						
NAME OF SCHOOL			LOCATION		CIRCUIT	
CONTACT PERSON(S) IN SCHOOL						
1.						
2.						
SCHOOL POPULATION	KG & PRIMARY		JSS		TOTAL	
	Male	Female	Male	Female	Male	Female
1. Teachers						
2. Pupils						
3. Food Vendors						
4. Others						
Grand Total						
EXISTING TOILET FACILITY						
Type of facility:						
Present condition of Toilet:						
Describe the type of maintenance done and how often it is done:						
INSTITUTIONAL SETUP						
Does the School have a School Management Committee?	Yes	No	Does the School have a School Health committee?	Yes	No	

**MEMBERS OF THE SCHOOL HEALTH COMMITTEE**

Name	Designation	Signature
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		

We the above duly constitute the School Health Committee of .....

..... School which is located at

..... in the .....Municipal/District.

We undertake to be responsible for health (including sanitation) development of the pupils this school in line with the Ghana Education Service's School Health Education Programme (SHEP).





**FORM 3:**

**DRAIN CLEANSING INSPECTION CARD**

DATE	TIME	SECTION OF DRAIN	CONDITION	REMARKS

**FORM 4:**

**REPLACEMENT OF FIXTURES AND APPURTENANCES**

Item	Date of Damage	Description of Damage	Date of Replacement	Quantity	Unit Cost (GH¢)	Amount (GH¢)