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**SCHEDULES** 

IN exercise of the power conferred on the Minister responsible for the Community Water and Sanitation Agency by section 18 of the Community Water and Sanitation Agency Act, 1998 (Act 564) and acting on the advice of the Board of the Community Water and Sanitation Agency, these regulations are made this 14<sup>th</sup> day of December, 2011.

#### General principles

#### District Assembly as approving authority

- 1. (1) a person who intends to provide a water facility or sanitation facility in a rural community and small town shall apply in writing to the respective District Assembly.
- (2) an application to provide a water facility or sanitation facility in a rural community and small town shall specify
  - (a) the name and contact address of the applicant
  - (b) the address of the registered office of the applicant
  - (c) the location and type of the water facility or sanitation facility, and
  - (d) any other information that the District Assembly considers necessary
- (3) the District Assembly, shall in consultation with the Agency consider the application within ten days of the receipt of the application and may grant or refuse the application
- (4) where the application is granted, the District Assembly shall inform the applicant within fifteen days of the decision giving reasons for the refusal
- (5) where the application is refused, the District Assembly shall inform the applicant within fifteen days of the decision giving reasons for the refusal
  - (6) an applicant whose application is refused under subregulation (5) may re-apply
- (7) for the purposes of subregulation (1), the provision of a water facility includes the rehabilitation or expansion of an existing one.

#### **Appeal**

- 2. (1) an applicant who is aggrieved with a decision of the District Assembly to grant an application may lodge a complaint in writing to the Regional Co-coordinating council within twenty-one days after receipt of the notice of the decision of the District Assembly
  - (2)the applicant shall
    - (a) state the nature of the objection
    - (b) attach a copy of the decision objected to and

- (c) attach the relevant documents for the determination of the complaint
- (3) the Regional Co-ordianting Council shall take a decision on the complaint within ten days after receipt of the complaint.

### **Water and Sanitation Management Team**

- 3. (1) a District Assembly shall establish a Water and Sanitation Management Team to manage a water or sanitation facility for the benefit of a community.
  - (2) the composition and procedure in respect of the management team shall be as specified in the first schedule.
  - (3) the composition and procedure in respect of a community with a borehole fitted with a pump shall be in accordance with the guidelines of the Agency.

#### **Setting of tariffs**

- 4. (1) the management team shall, in consultation with the community, propose tariffs in accordance with the tariff guidelines provided in Part One of the Fourth Schedule
  - (2) the Agency shall vet the tariffs proposed by the management team to ensure that the tariff conforms with the guidelines specified in the Fourth Schedule
  - (3) a District Assembly shall, on recommendation of the Agency, approve the levels of the tariffs proposed by a management team.

#### Financial administration

5. The management team shall be guided by the provision of the Financial Administration Act, 2003 (Act 654) and the Financial Administration Regulations, 2004 (LI 1802).

#### Provision of water facility and related sanitation facility

6. A person responsible for the provision of a water facility or sanitation facility in a given community shall provide that service in accordance with the relevant strategy under the national community water and sanitation programme outlined in the Ministry responsible for Water Resources Works and Housing and the National Environmental Sanitation Policy outlined by the Minister responsible for Local Government and Rural Development.

#### **Standards**

#### Basic requirement for community water facility

- 7. (1) a person who designs a water facility for a community shall ensure that
  - (a) An individual in a served community has access to not less than twenty litres of water per day

- (b) The water facility or delivery point in the case of a piped scheme is located at a place which is within a walking distance of not more than five hundred meters from the farthest house in the community or a section of the community
- (c) The water facility provides safe water to the community throughout the year; and
- (d) The water facility design conforms to the design guidelines issued by the agency
- (2) the District Assembly shall, in consultation with the Agency, approve the design of a water facility.

#### Requirement for drilling and siting borehole

- 8. (1) a person responsible for the construction of a borehole and the installation of a pump for the supply of water to a community shall ensure that the minimum yield of water from the borehole is at least ten liters per minute
- (2) a person shall not drill a borehole unless a qualified person has carried out the appropriate ground water investigations.
  - (3) a selected borehole site shall be at a minimum distance of fifty meters from a
    - (a) Sanitation facility;
    - (b) a form of garbage disposal point or cemetery;
    - (c) sacred grove; or
    - (d) any other known source of real or potential contamination within the community

#### **Pumps**

9. A person responsible for the construction of a borehole or a dug well shall in connection with the borehole or dug well install a pump that is approved by the agency.

#### Basic design criteria for piped scheme and limited mechanization scheme

10. The basic design criteria for a piped scheme and a limited mechanized scheme for water that is used in a community shall meet the requirement specified in the second schedule.

#### Piped water supply system

- 11. A person who operates a piped water supply system shall ensure that the piped water supply system is maintained in a sustainable manner by
  - (a) Delivering the specified quantity of water to customers over the designed life of the piped water supply system;

- (b) Producing water in accordance with the water quality standard in these regulations;
- (c) Delivering water in a cost effective manner;
- (d) Delvering water in a virtually uninterrupted manner, at least ninety-five percent of the time
- (e) Ensuring that routine and periodic maintenance is carried out for electro mechanical equipment and civil works structures, with minimum interruption of supply;
- (f) Ensuring that the management team is in accordance with the respective District Assembly's bye-laws;
- (g) Ensuring that the source of water supply is protected from the risk of contamination; and
- (h) Ensuring that operational hazards are avoided.

#### Sanitation facility for institutions

#### Design and construction criteria

- 12. (1) a person who designs or construct a sanitation facility for an institution shall ensure that the sanitation facility
  - (a) is kept in a condition that makes the sanitation facility free from flies and odour:
  - (b) safely disposes of human faecal matter;
  - (c) is structurally stable to prevent collapse throughout its design life;
  - (d) is suitable and ensures ease of use by children, persons with disability and the aged:
  - (e) conforms to the design guidelines for a sanitation facility;
  - (f) has a hand washing facility
- (2) the District Assembly shall in, collaboration with the Agency, approve the design of the sanitation facility.

#### Criteria for siting of sanitation facility

13. A sanitation facility for an institution shall be sited as specifies in the Third Schedule.

#### **Defective sanitation facility**

14. (1) where a sanitation facility does not meet the requirement of the Third Schedule, the Agency shall recommend the District Assembly to declare that sanitation facility defect.

- (2) the District Assembly shall order the person responsible for the provision of the sanitation facility to rectify the defect.
- (3) where the defect has not been rectified within a time specified by the District Assembly, the District Assembly may demolish the sanitation facility and surcharge the person responsible for the provision of the sanitation facility.

#### Water safety

#### Activities to be undertaken by operator

- 15. (1) an operator shall, pursuant to the directions of the Management Team, develop a water safety plan to ensure the safety of the water supplied.
  - (2) the water safety plan shall include requirement on
    - (a) water quality testing;
    - (b) water safety risk assessment;
    - (c) water safety risk management; and
    - (d) social and environmental surveillance.
  - (3) An operator shall ensure that
    - (a) the water supplied from the water facility for which that operator is responsible, meets the required standard prescribed by the Standard Authority, and
    - (b) the operation of the water facility is in accordance with the water safety framework.
  - (4) An operator of a water facility shall implement a water safety plan for that water facility in accordance with the water safety framework.

#### Establishment of water quality testing parameters

16. The Standard Authority shall establish a baseline water quality testing parameter to be used by an operator of a water facility.

#### Water quality testing

- 17. (1) The operator of a water facility shall
  - (a) carry out water quality testing at least twice in each year for the period of
    - (i) the rainy season; and
    - (ii) the dry season; and
  - (b) comply with the parameters for the physical and bacteriological monitoring, determined by the Standard Authority.

- (2) the monitoring for chemical parameters by an operator of a water facility shall depend on local conditions.
- (3) Testing for water quality shall be conducted in accordance with the standard prescribed by the Standard Authority.
- (4) A District Assembly is responsible for ensuring the safety of the water provided through testing for water quality.
- (5) The Agency shall ensure that the testing for water quality is done by the respective District Assembly.

#### **Medical certification**

18. A person shall not work on the production and distribution network of a water supply system unless that person is certified as medically fit twice in each year by a qualified physician and has the requisite inoculations required by the Ghana Health Service.

#### Tariff amounts for individual or institutional customer

- 19. (1) The actual amount to be charge to an individual or an institutional customer for the supply of water is based on the unit rate and the meter reading for the month as specified in Part Two of the Fourth Schedule.
  - (2) The Management Team shall set aside an amount covering two months consumption, for the payment of the connection fee.
  - (3) Despite sub-regulation (2), a connection fee shall not exceed the tariff rate for 100m<sup>3</sup> of water for that connection.
  - (4) A defaulting customer shall pay a re-connection fee which does not exceed five percent of the connection fee.
  - (5) An authorized agent of the Management Team shall carry out connections for individual customers and institutional customers.

#### Methods of tariff collection

- 20. The method of tariff collection are
  - (a) the pay-as-you-fetch method at standpipes or pumps, and
  - (b) monthly billing for individual customers and institutional customers.

#### Bills for tariffs

- 21. (1) The Management Team, in consultation with the District Assembly, is responsible for the investment of the portion of the tariff that is set aside for major rehabilitation and expansion of water supply coverage to new settlements.
  - (2) The Management Team shall, in consulatation with the District Assembly, invest the money set aside in money market instruments or other innovative financing mechanisms to ensure sustainability of the water facility.

#### **Customer complaints**

- 23. (1) The Management Team shall
  - (a) establish a clear and publicized procedure to receive and address customer complaints, and
  - (b) comply with the laid down procedure of customer complaints.
  - (2) The Management Team shall give notice to the entire community fourteen days before any change in the procedure for addressing customer complaints is effected.

#### **Inspection of pumps**

- 24. (1) A person who intends to install a pump shall request the District Assembly to carry out an inspection of the pump and obtain approval before its installation.
  - (2) The District Assembly shall in collaboration with the Agency carry out the inspection and may grant approval.
  - (3) A person who installs a pump without the approval of the District Assembly, commits an offence and is liable on summary conviction to a fine of not less than one hundred and fifty penalty units and not more than four hundred penalty units.

#### **Charging of fees**

25. The Agency shall charge for the services specified in the second column of the Fifth Schedule, the corresponding fees specified in the third column of the Schedule.

#### Damage to water facility

26. A person who willfully causes damage to the whole of a water facility or a part of a water facility commits an offence and is liable on summary conviction to a fine of not less than three hundred penalty units and not more than six hundred penalty

units o to a term of imprisonment of not less than eighteen months and not more than three years or to both.

### Offences and penalties

- 27. (1) A person who contravenes a provision of these regulations for which a penalty is not provided, commits an offence and is liable on summary conviction to a fine of not less than one hundred and fifty penalty units and not more than four hundred penalty units.
  - (2) a person who is convicted for a contravention of the technical standards provided in these regulations, may be barred from
    - (a) undertaking any job, or
    - (b) operating

In the community water and sanitation subsector for a period of not less than one year and not more than three years.

(3) Subregulation (2) applies in addition to the fine.

#### **Transitional provision**

28. A Water and Sanitation Development Board or Water and Sanitation Committee in existence before the commencement of these regulations shall be deemed to be the Water and Sanitation Management Team.

#### Interpretation

29. In these regulations unless the context otherwise requires,

"community water and sanitation subsector" means a part of the water sector that deals with the provision of safe water or sanitation services in rural communities and small towns in the country;

"defect" means lack of something essential to completeness, shortcoming or failing;

"designed life" means the period of time assigned for the optimum performance of a water facility;

"delivery point" means a stand post for the fetching of water;

"dug well" means a water extraction facility excavated with hand tools;

"facilitate" means carrying out reasonable acts essential to expedite the implementation of water and sanitation activities including the regulation of the community water and sanitation subsector;

"financing mechanism" means the process for securing funding;

"individual customer" means a property owner whose house or property has a piped connection to the water facility;

"institution" includes basic schools, clinics and health centers;

"institutional connection" means direct piping of water to an entity other than a household;

"institutional customer" means an entity or organization which has a piped connection to the water facility;

"limited mechanized scheme" mean a water supply system with a pumped source, restricted transmission and piped distribution network;

"Management Team" means the Water and Sanitation Management Team established under regulation 3;

"money market instrument" means a low risk and short term interest bearing security with a maturity of not more than one year;

"national community water and sanitation programme" means a part of the policies and strategies for the provision of safe water and related sanitation services as well as the promotion of hygiene nationwide;

"new settlement" means newly developed areas in the same community; "operational hazard" means a danger that may be encountered in the course of work;

"ownership" means the legal ownership vested in a District Assembly with the right of access to the facilities vested in the community which is responsible for the day to day management of the system;

"pay-as-you-fetch" mean payment for water at the point of collection of the water;

"piped water supply system" means a water supply facility with a pumped source, transmission, piped distribution network and a storage reservoir;

"pump" means an electrically powered or mechanically operated equipment used for lifting water from a borehole or dug well into a reservoir or container;

"qualified person" means a person with the basic qualification and minimum years of experience in the respective assignment;

"safe water" means water that meets the requirements of drinking water standards set by the Standard Authority;

"sanitation facility" includes a structure constructed with an underground receptacle for use as a toilet in an institution and a facility that separates human excreta from human contact hygienically;

"served community" means a community with water supply needs that fully meets the standard requirements;

"standard" means a basis for assessment set by the Standard Authority Act, 1973 (NRCD 173);

"sustainability" means appropriate measures to ensure and guarantee the continuous provision of safe and reliable water services;

"technical assistance" means providing professional advice and quality assurance of water and sanitation delivery activities as provided for in the Act;

"unit rate" means cost per cubic metre;

"water facility" means a system that serves as a source of water supply; and

"water safety framework" means a management tool developed by the Agency which provides the strategy for keeping water supply safe for use.

#### FIRST SCHEDULE

### Composition and procedure for Water and Sanitation Management Team (Regulation 3)

- 1. A Management Team shall consist of not less than ten and not more than fifteen elected members, at least one third of who are women and at least one third of who are representatives of the Assembly or Unit Committees.
- 2. Subject to paragraph 1, the assembly shall determine the total number of members of each Management Team based on the number of constituencies that exist in the area covered by the Management Team.
- 3. The members of the Management Team shall be elected from representative constituencies
- 4. A constituency shall determine its own electoral procedure
- 5. The electoral procedure shall be facilitated by the District Water and Sanitation Management Team.
- 6. For the purpose of election, a representative constituency shall include
  - (a) Water and sanitation committees established in designated neighborhoods of the area or community;
  - (b) The elected Assembly members of the community
  - (c) The Unit Committee members of the community;
  - (d) Water user groups;
  - (f) A representative of the traditional authority, except that the chief of the community is not eligible for election to the Management Team.

For the purpose of this schedule,

"a water and sanitation committee" means a management team for a community which has a borehole with a hand pump as a water supply facility;

"connection fee" means a fee paid upfront for direct piped connection of water to a house, institution or other property excluding the cost of material and labour; and

"constituency" means a section of a community or identifiable group of people that have a common interest in the water facility.

### **SECOND SCHEDULE**

Basic design criteria for piped scheme and limited mechanization scheme for small towns

(Regulation 10)

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NO.	Design Criteria	Requirement	
1.	Storage reservoir volume	35% - 40% of average daily demand	
2.	Peak daily factor (transmission mains)	1.2 meter minimum	
3.	Peak hourly factor (distribution mains)  Design software stimulating hourly flows may be used for hourly factors	2.5 meter minimum	
4.	Residual pressures (distribution system)	10 meter head maximum 60 meter head maximum 5 meter head maximum at outlets	
5.	Design period	Ten to fifteen years for pipe network	
6.	Borehole pumping	Sixteen hours maximum	
7.	Surface water intake pumping	Sixteen hours maximum	
8.	Pipe sizes (uPVC/HDPE)	75 millimeters – minimum for transmission mains 50 millimeters – minimum for distribution mains 19 millimeters - minimum for house connection uPVC/HDPE pipes to be provided for distribution mains uPVC/HDPE pipes to be provided as as minimum diameter pipes leading to standpipes	
9.	Galvanized steel or ductile iron	Provided for exposed piping	
10.	Standpipe with two outlets	Six hundred people per standpipe with two outlets	

		Maximum walking distance of
11.	Walking distance to a standpipe	500 meters
10		Placed at all major branches
12.	Isolating valves	and on mains at minimum
		distance of 500 meters
		Located 3 meters maximum
13.	Fire hydrants	from a storage tank
		(a) Determined and
14.	Control points	created within the
		water system network
		during the design and
		construction stages;
		(b) A minimum of four and
		it excludes the water
		sources which is used
		depending on the size
		of the water system
		network;and
		(c) The location and
		distribution is to be
		based on the water
		system components
		listed above, pressure
		distribution in the
		pipeline and nodes as
		well as materials used
		for the pipelines.

### **THIRD SCHEDULE**

Criteria for siting of a sanitation facility
(Regulation 13 and 14)

NO.	Criteria
1.	A minimum of fifty meters from a borehole, dug well, spring source or water pipeline
2.	In a manner that allows free flow of air through the sanitation facility.

### **FOURTH SCHEDULE**

### **PART ONE**

### Components of proposed tariff (Regulations 4 and 5)

### Water tariff

No.	Component
1.	Water production cost
2.	Distribution cost
3.	Routine maintenance and other contracts
4.	Repair work by staff and private maintenance contracts
5.	Water quality monitoring at plant level
6.	Tariff collection cost (vendors) (not more than 20% of the total tariff)
7.	Replacement cost (20% of the total sum of items 1 to 6)
8.	Rehabilitation and expansion (5% of the total sum of items 1 to 6)
9.	Sanitation fund (8% of the total sum of items 1 to 6)
10.	Contingency (2% of the total sum of items 1 to 6)

### Water production cost

No.	Item		
	Staff and casual labor working on production including		
1.	a. Salaries before tax,		
	b. Social security contributions,		
	c. Staff medical expenses,		
	d. Expenses on safety equipment, and		
	e. welfare		
2.	Chemicals for dosing of water and cleaning of treatment units		
3.	Electricity		
4.	Fuel and lubricants		
5.	Any other production expenses		

### Distribution cost

No.	Item		
	Staff and casual labor working on distribution including		
1.	a. Salaries before tax,		
	b. Social security contributions,		
	c. Staff medical expenses,		
	d. Expenses on safety equipment, and		
	e. welfare		
	Chemicals like bleaching powder used for cleaning out storage tanks and		
2.	distribution network pipes, among others.		

### **PART TWO**

Tariff setting for an individual customer or an institutional customer

(Regulation 19 (1))

	(=)	,	
		UNIT RATE GH¢	ACTUAL AMOUNT
ITEM	DESCRIPTION	PER CUBIC METER	OF TARIFF GH¢
1.	Individual and non commercial customer	1.2 to 1.3 times the stand pipe tariff per cubic meter	Volume of water consumed in cubic meters times the unit rate.
2.	Commercial customer	1.4 to 1.5 times the stand pipe tariff per cubic meter	Volume of water consumed in cubic meters times the unit rate

For the purposes of this Schedule,

"storage tank" means a reservoir where pumped water is stored before distribution; and

"distribution network pipes" means the system of pipes through which water is distributed to consumers.

### FIFTH SCHEDULE

Fee (Regulation 25)

NO.	Services	Fees chargeable
1.	Data services	Minimum of GH¢50.00
2.	Documentation services	Minimum of GH¢50.00
3.	Technical assistance services	Minimum of GH¢100.00 per day