

STATUTORY INSTRUMENT

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THE NATIONAL WATER RESOURCES MANAGEMENT AGENCY (GROUND
WATER DEVELOPMENT AND PROTECTION) REGULATIONS, 2021
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THE NATIONAL WATER RESOURCES MANAGEMENT
AGENCY ACT
(ACT NO 5 OF 2017)

THE NATIONAL WATER RESOURCES MANAGEMENT
AGENCY (GROUND WATER DEVELOPMENT AND
PROTECTION) REGULATIONS 2021

In exercise of the powers conferred upon him by section 36 of the National Water Resources Management Agency Act 2017, the Minister responsible for water resources hereby makes the following regulations -

PART I—PRELIMINARY

1. In these Regulations unless the context otherwise requires - Interpretation

"Act" means the National Water Resources Management Agency Act No. 5 of (2017);

"activity" means water well drilling;

"aquifer" means soil or rock medium located beneath the ground surface in which there is a flow of water;

"Agency" means the National Water Resources Management Agency established under the National Water Resources Management Agency Act No. 5 of (2017);

"defective well" means a well wherein the abstraction of groundwater has stopped due to reasons that include water quality problems, decline in yield or well collapse;

"EPA" means Environment Protection Agency established under section 2 of the Environment Protection Agency Act 2008;

"groundwater" means water found beneath the ground surface which can be abstracted and accessed by digging, mechanised or manual drilling or by any other method

"grouting" means the sealing off of an opening beneath ground surface using cement concrete or other impervious material capable of preventing the flow of water across it;

"landholder" means a person who owns, possesses or occupies a piece of land as an absolute owner ;

"licence" means a licence issued under the Act or these regulations ;

"licensee" means a holder of a licence issued under the Act or these regulations;

"MDAs" means Ministries, Departments and Agencies;

"numbering systems" means a unique code assigned by the Agency to any drilled well;

"well" means a point for the abstraction, monitoring or conduct of research on groundwater put in place by a construction activity;

"well contractor" means an individual, company or body of persons licensed by the Agency to construct water well;

"well head" means a permanent closure of the top of a well, either by a pump or other top which is specified for the casing diameter and which cannot be removed easily;

"yield" means potential discharge from a well.

PART II—PROCESSING OF LICENCE APPLICATION

2. (1) A person shall not construct a well for the purposes of - Application for a licence

- (a) abstraction ;
- (b) exploration ;
- (c) monitoring of groundwater ; or
- (d) research

unless the person holds a valid licence granted in accordance with the Act and these regulations.

(2) An application for a licence shall be submitted to the Agency in the prescribed form as stipulated in the First Schedule.

(3) The application shall contain the following information -

- (a) particulars of the applicant;
- (b) particulars of responsible field personnel of the applicant which shall include -

- (i) the list of staff;
 - (ii) qualification and experience of staff at least one of whom shall be able to communicate in the English Language;
 - (iii) at least one qualified driller or well technician;
 - (iv) at least one experienced engineer, hydrogeologist, geologist or a geological technician ;
- (c) list of available plants and equipment indicating
- (i) the description of the drilling rig and compressor ;
 - (ii) the trademark;
 - (iii) age;
 - (iv) state of repair ; and
 - (v) capacity of the drilling rig and compressor
- (d) list of constructed activities conducted prior to the application indicating-
- (i) the year the activities were undertaken;
 - (ii) the place where the activities took place;
- (e) any other information that the Agency may request

(4) The application shall be accompanied with the appropriate administrative and processing fee as specified in the Fifth Schedule

3. The categories of a drilling licence shall be as set out in the Second Schedule. categories of drilling licence

4. The Agency shall acknowledge receipt of the application within 10 days of receipt of the completed application form. Acknowledgement of application

5. (1) Where an applicant- Incomplete Application

(a) fails to pay the appropriate administrative and processing fees;

(b) submits an incomplete application form; or

(c) submits an application that has errors; the Agency shall notify the applicant in writing to rectify the situation within fourteen (14) days after receipt of the notice.

(2) Where the applicant fails to rectify the situation within fourteen (14) days, the Agency shall refuse to process the application.

6 After considering an application and the Agency grants the application , it shall notify the applicant of its decision in writing. Grant of an Application

7 (1) The Agency shall refuse to grant a licence to an applicant on the following grounds- Refusal of application

(a) public safety ;

(b) where it is believed that the applicant is unable to make available all the required documents for the issuance of a licence; ;or

(c) any other reason that the Agency deems necessary not to grant the applicant a licence.

(2) The Agency shall notify the applicant in writing of its decision to refuse the application and shall stipulate the grounds on which the application was refused.

Conditions attached to a licence

8. Where a licence is granted to an applicant he shall comply with all the conditions attached to the licence.

licence fees

9. (1) An applicant who is granted a licence shall pay the licence fee set out in the Fifth Schedule.

(2) The fees referred to under sub-regulation (1) shall be used to defray the cost of groundwater management and regulation.

Register

10. (1) The Agency shall maintain a register which shall contain the particulars of licences granted by the Agency

(2) The register shall be open to the public during working hours.

(3) Extracts from the register may be obtained from the Agency on request

Duration and renewal of a licence

11. (1) A licence issued under these Regulations shall be valid for a period of one year.

(2) A licensee who wishes to renew his licence shall submit a renewal application to the Agency not later than 90 days before the expiration of the licence.

(3) Renewal of a licence shall have the same requirement as a new application under the Act and these regulations

Transfer of a Licence

12. (1) A licence granted under the Act and these regulations shall not be transferred unless the licensee obtains a written authorisation from the Agency

(2) The Agency shall conduct background check on the proposed transferee before authorising the transfer.

13. (1) The Agency may suspend or cancel a licence where it is satisfied that - Suspension or cancellation of a licence

(a) the holder of the licence has-

(i) violated a term or condition of the licence;

(ii) failed to comply with the conditions set by the Environmental Protection Agency;

(iii) given information to the Agency which is false or misleading

(b) it is in the public interest to do so

(2) Where the Agency has grounds for the cancellation or suspension of a licence under sub-regulation (1) it shall notify the licensee to show cause why the licence should not be suspended or cancelled.

(3) Where the licensee is unable to persuade the Agency or fails to respond to the notice under sub-regulation (2), the Agency shall proceed to cancel or suspend the licence

(4) The Agency may restore the licence when the licensee remedies the situation that gave rise for the cancellation or suspension

PART III-COMPLAINTS COMMITTEE

14. (1) Pursuant to subsection (1) of section 9 of the Act the Agency shall establish a committee to be known as the Complaints Committee

(2) The Complaints Committee shall comprise the following members-

- (a) Chairman of the Board
- (b) a Board member; and
- (c) a technical employee of the Agency

(3) The Complaints Committee shall be responsible for reviewing the application of an applicant who is aggrieved with the decision of the Agency.

Appeals

15. (1) An applicant who is aggrieved with the decision of the Agency may appeal to the Complaints Committee.

(2) The aggrieved applicant shall submit a letter to the Complaints Committee indicating his wish to appeal against the decision and the reasons for appealing .

(3) The aggrieved applicant shall attach to the letter referred to under sub- regulation (2) the following-

- (a) a copy of the Agency's letter notifying the applicant of the refusal of the application ; and
- (b) all relevant documents that would assist the Complaint Committee in determining the matter.

(4) The aggrieved applicant shall submit the letter to the Complaints Committee within 30 days of the Agency's decision .

(5) Where an applicant is dissatisfied with the decision of the Complaints Committee he may appeal to the Minister.

(6) An applicant dissatisfied with the decision of the Minister may appeal to the High Court and the decision of the High Court shall be final.

PART IV- CONSTRUCTION OF A WELL

16. (1) Where a licence is granted to a person for the construction of a well, the person shall notify the Agency in writing 5 days before the commencement of mobilisation. Construction of a well

(2) The notice shall be made in the format as specified in the Third Schedule.

(3) The Agency shall acknowledge receipt of the notice in writing within 7 days after receipt of the said notice.

(4) The Agency may grant permission to a licensee to proceed with the construction works within 14 days after acknowledging the receipt of the notice of intention .

17. (1) A licensee shall not construct a well in a manner that may lead to contamination or pollution of groundwater or aquifer. Environmental protection requirement

(2) A licensee shall in order to avoid contamination of groundwater ensure that-

- (a) a well fitted with hand pump is situated at a minimum distance of 30 metres from the known source of real or potential contamination;
- (b) a mechanised well is situated at a minimum distance of 100 metres from the known source of real or potential contamination ;
- (c) shallow water whether contaminated or situated in the overburden or rock is completely sealed off;
- (d) the minimum requirement for the sanitary seal of 2 metres of concrete grouting below the ground surface is satisfied;

- (e) well casing of not less than one metre above the ground or the floor of the finished pump house or pump pit is maintained if other measures are not taken to prevent direct inflow of surface water into the well;
- (f) immediately after construction of the well, the top of the casing is closed with a tight closing or top head;
- (g) the well is properly sealed with a well head;
- (h) the platform for a hand pump or the floor in the pump house is constructed in a manner that does not permit water to return to the well ;
- (i) the joints of casing segments are watertight; and
- (j) other works and activities that the Agency directs for the prevention of contamination and protection of the environment are carried out.

(3) A licensee who undertakes a construction activity in the nature of -

- (a) manual digging;
- (b) drilling ; or
- (c) any activity that may result in contact with or access to ground water

shall ensure that the activity is carried out in a manner that avoids contamination or pollution of ground water or aquifer.

(4) For the purpose of these regulations contaminants or pollutants of groundwater includes all activities that may lead to groundwater pollution .

(5) During collection of drilling cuttings a licensee shall collect samples of drilling cuttings at one metre intervals and in the event of a sudden change in the rate of penetration or lithology during drilling he shall inform the Agency of such changes.

18. (1) A licensee who drills a well shall ensure that a sample is taken, preserved and transported to the Agency or any recognised laboratory which shall conduct water quality analysis to ascertain the safety of the water collected in accordance with WHO standards.

Water
quality
Analysis

(2) The cost of sampling, transportation and laboratory analysis shall be borne by the licensee.

(3) The report on water quality shall be submitted to the Agency and shall contain the information specified in the Fourth Schedule.

19. (1) An owner of a well shall register the well with the Agency annually.

Registration
of Wells

(2) The owner shall obtain the required registration form from the Agency after payment of the appropriate administrative and processing fees.

20. (1) An authorised officer of the Agency shall at any time without prior notice -

Inspection
of a well
site

- (a) have access to a well site;
- (b) inspect a well site and examine the material excavated from the site;
- (c) take drilling cuttings and samples of water abstracted from the well; and
- (d) inspect and make copies or extracts of the records required to be kept by the drilling contractor under these regulations.

(2) Where a licensee constructs a well on land belonging to or occupied by another person, the licensee shall be deemed to be the owner of the well.

Well records

21. (1) A licensee shall keep records of the progress of any construction activity and shall submit a detailed report to the Agency.

(2) The records referred to under sub-regulation (1) shall include but not limited to the following -

- (a) location and landmark of the activity site;
- (b) the Global Positioning System Coordinates of the activity;
- (c) geological log certified and signed by a qualified hydrogeologist , geologist or geological technician;
- (d) the pumping test results;
- (e) the water quality result;
- (f) the size and position of casings and screens;
- (g) the duration of drilling and digging a well ;
- (h) the completion date for drilling ; and
- (i) the identification number of the well which shall be consistent with the national well numbering system.

Submission
of Well
records

22. (1) Where the construction activity consists of not more than 5 wells, the licensee shall within 30 days of the cessation of the construction activity submit a complete copy of the well records to the Agency.

(2) Where the construction activity consists of more than 5 wells, the licensee shall within 60 days of the cessation of the construction activity submit a complete copy of the well records to the Agency.

(3) The well records referred to under sub-regulation (2) shall be in relation to -

- (a) wells which are successfully drilled;
- (b) dry well; and
- (c) defective wells

(4) The well records shall be submitted together with -

- (a) information on the development of the wells;
- (b) results of pumping and recovery tests conducted;
- (c) information on water quality as indicated in the Fourth Schedule ; and
- (d) field test results

(5) The drilling cutting referred to under sub-regulation (5) of regulation 19 shall be submitted to the Agency together with information on the location, landmark and global positioning system coordinates of the well.

23. (1) A licensee or any other person shall report existence of any abandoned defective well to the Agency.

Abandonment
of defective
wells

(2) The report shall state the precise location of the defective well.

(3) The Agency may issue instructions to the owner of a defective well to abandon the well after an assessment is done or reported

(4) Where the owner of a defective well fails to comply with the order given by the Agency, the Agency shall take the necessary steps to execute the order and the expenses incurred shall be surcharged to the owner.

(5) Where a well with an installed casing is to be abandoned the well shall be back filled to at least one metre below ground surface and the casing in the unfilled portion shall be removed and effectively grouted with concrete to match with the existing ground level.

(6) Where differences in water quality occur between two aquifers the sealing between the aquifers shall be done in a manner to prevent exchange of water between the aquifers

Abandonment
of defective
wells

24. (1) A dry well or a well that does not produce sufficient water during drilling shall be-

- (a) backfilled to a depth of one metre below the ground level; and
- (b) grouted with cement.

(2) Where well records exist in relation to the well an additional report to the Agency shall be required.

(3) Where an attempt to develop a well fails and a dry well results, the licensee shall apply for an alternative well construction and regulation 12 shall apply

Rehabilitation
of defective
wells

25. (1) Where a well is found to be defective the well shall be rehabilitated

(2) A licensee shall notify the Agency of any rehabilitation work on a well that involves changes to the well design and includes-

- (a) backfilling of the lower parts of the well;
- (b) installation of a new screen or casing ; or
- (c) other construction activities of the well.

(3) A licensee who undertakes the rehabilitation of a well shall submit a report on the rehabilitation to the Agency and the report shall -

- (a) provide details of the location of the well; and
- (b) be within the time limits stipulated in the regulations

(4) Where a licensee fails to apply due diligence in the construction of the well the cost of the rehabilitation shall be borne by him.

26. The holder of a mining licence or a prospecting licence who encounters groundwater in any workings carried out under the licence shall - Groundwater
in mining
operation.

- (a) promptly notify the Agency of any groundwater;
- (b) submit any relevant data to the Agency;
- (c) take all the measures necessary for the protection of groundwater against pollution;
- (d) comply with any directions of the Agency regarding the protection or disposal of groundwater

PART V- MISCELLENOUS PROVISIONS

Breach of regulations

27. Without prejudice to the Act and these regulations where a person fails to comply with these regulations the Agency may -

- (a) seal off any premises of operation of the person; and
- (b) impose an administrative fine as stipulated in the Fifth Schedule.

offences and penalties

28. (1) Any person who constructs a well contrary to these regulations commits an offence and is liable on summary conviction to a fine of not less than 5,000,000.00 in respect of each well constructed or to a term of imprisonment not less than one year or to both the fine and imprisonment.

(2) A licensee who transfers a licence without the authorisation of the Agency commits an offence and is liable on summary conviction to a fine of not less than Le 5,000,000.00 or to a term of imprisonment not less than one year or to both the fine and imprisonment

(3) A person who assaults , threatens, obstruct or allows any person to assault, threaten or obstruct an authorised officer or any person in the performance of his duties under these regulations commits an offence and is liable on summary conviction to a fine not less than Le5,000,000.00 or a term of imprisonment not less than one year or to both the fine and imprisonment

(4) A person who hires the services of an unlicensed contractor to construct a well commits an offence and is liable on summary conviction to a fine not less that Le5,000,000.00 or to a term of imprisonment not less than one year or to both the fine and imprisonment

(5) A person who fails to comply with any directive from the Agency commits an offence and is liable on summary conviction to a fine of not less than Le5,000,000.00 for each day during which the offence continues or to a term of imprisonment not less than one year or to both the fine and imprisonment .

**SCHEDULES
FIRST SCHEDULE
Regulation 2(2)**

APPLICATION FOR WELL LICENCE

REPUBLIC OF SIERRA LEONE	
NATIONAL WATER RESOURCES MANAGEMENT AGENCY	
APPLICATION FOR WELL DRILLING LICENCE	
Company name:	
Address:	
.....	
.....	
PO:	Box:
Tel:	
e-mail:	
Registered Company No:	
<i>Full name of directors and their citizenship:</i>	
<i>Name and address of Company's bankers:</i>	
<i>List of equipment: (indicate whether owned or hired) Specify and include as Annex 1</i>	
<i>List of key personnel (including field personnel of each drilling crew) Specify and include as Annex 2</i>	
<i>List of projects carried out in the last five projects carried out in the last 5 years with names address of referees:</i>	
I declare that the information given on this form and attachments hereto is correct to the best of my knowledge and belief.	
Signature:	Date:

NB: The application and processing fee shall be paid as specified by notice in the Gazette or as enacted in the Finance Act,

**SECONDSCHEDULE
Categories for drilling licence
Regulation 3**

Category for the equipment acquisition of licence	No. of sets of drilling
A	<i>Not less than two rigs and a warehouse of drilling tools and equipment.</i>
B	<i>At least one rig and a warehouse of drilling tools and equipment.</i>
C	<i>Hires rigs for its operations.</i>
RENEWAL OF LICENCE	
A	<i>Not less than two rigs and a warehouse of drilling tools and equipment.</i>
B	<i>At least one rig and a warehouse of drilling tools and equipment.</i>
C	<i>Hires rigs for its operations</i>
FOREIGN CONTRACTORS	Acquisition of new licence by foreign contractors Renewal of licence by foreign contractors.

N/B Kindly note that all well contractors must obtain a unique borehole number from the Agency for any well constructed/rehabilitated. On no account should any well be drilled whether for private purposes or not without a unique numbering system

**THIRD SCHEDULE
Regulation 16(2)**

REPUBLIC OF SIERRA LEONE
WATER RESOURCES AGENCY

Name:.....
 Address:.....
 P.O Box:.....
 Tel:.....

E-mail: No. of wells:

Location of proposed drilling site(s), (If needed use additional sheet):
 Proposed drilling contractor:
 Drilling period: Start:..... End:.....

Proposed use of water (Pls tick where applicable)

Domestic:..... Municipal:

Industrial/mining: Aquaculture:

Agricultural: Others (pls specify):

Will motorised pump be installed: No Yes:

If yes, expected quantity of water to be abstracted (m3/hr/day):

Will geophysical survey be carried out: Yes: No:

NB: It is mandatory for a geophysical survey to be carried out for all boreholes drilling

Name of applicant: Date:
Signature:

Signature:.....

Drinking water quality parameters

FOURTH SCHEDULE
Regulations 18(3), 22(4)(c)

Parameters		WHO recommended Permissible Limits
1.	Water Temperature (°C)	No. Value
2.	pH	6.5 – 8.5
3.	Turbidity (NTU)	<5.0
4.	Conductivity (µS/cm)	<450
5.	TDS (mg/l)	<248
6.	Salinity (ppt)	<0.4
7.	Residual Chlorine (mg/l)	0.3-0.5 after 30min. disinfections
8.	Aluminium (mg/l)	<0.2
9.	Ammonia (mg/l)	No. Value
10.	Bromine (mg/l)	No. Value
11.	Calcium Hardness (mg/l)	<250
12.	Copper (mg/l)	<1.0
13.	Fluoride (mg/l)	<1.5
14.	Iron (mg/l)	<0.3
15.	Magnesium (mg/l)	<200
16.	Manganese (mg/l)	<0.4
17.	Molybdenum (mg/l)	0.25
18.	Nitrite (mg/l)	3.0
19.	Nitrate (mg/l) HR	<10
20.	Potassium (mg/l)	<6.0
21.	Phosphate (mg/l) LR	<20
22.	Silica (mg/l)	<15
23.	Sulphate (mg/l)	<400
24.	Sulphide (mg/l)	<0.5
25.	Sulphite (mg/l)	No. Value
26.	Chloride (mg/l)	<250
27.	Arsenic (mg/l)	0.01
28.	Chromium	<0.05
29.	Bicarbonate (mg/l)	No Value
30.	Zinc (mg/l)	<5.0
31.	E. Coli	Zero
32.	Faecal Coliforms (Total)	Zero
33.	Non-Faecal Coliforms	<10
34.	Vibro-parahaemolyticus	Zero
35.	Salmonella sp.	Zero

FIFTH SCHEDULE
Regulations 2(2),9(1), 27

CHARGES ASSOCIATED WITH ACQUIRING OF A BOREHOLE DRILLING LICENCES

No	Description of Charges	Amount (Le)	
1	Purchasing of Application form	200,000.00	
2	Administrative fee (Technical inspection and processing of Licences)	Western Area	750,000.00
		Provincial	4,500,000.00
3	Licences Fee	CLASS A (Own Two or more drilling Rigs)	5,500,000
		CLASS B (Own One drilling Rig)	4,000,000
		CLASS C (Ability to lease a drilling Rig)	3,000,000
4	Administrative Fines (Seal off, impoundment etc.)	The severity, duration, prevalence, circumstances, antecedent, degree of harm to lives and property, cost of remedies etc.	To be determined by the Agency

MADE this 28th day of September, 2021.

ENG. PHILIP KARIMU LANSANA
MINISTER OF WATER RESOURCES

FREETOWN,
SIERRA LEONE
SEPTEMBER, 2021.