



**Water Resources  
Management  
Authority**



# **Water Resources Management and Regulations**

**Introduction to Statutory Instruments 18, 19 & 20**



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## **Introduction to Statutory Instruments 18, 19 & 20**

Published by

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# Foreword by the Acting Director General



The Government of the Republic of Zambia enacted the Water Resources Management (WRM) Act No. 21 of 2011 which repealed the 1949 Water Act. The 1949 Water Act provided for regulation of surface water only. The 2011 Water Act was enacted to promote integrated water resource management principles that allow for the development and management of water re-

sources through the participation of key stakeholders to realize effective and equitable utilization of water resources for sustainable development. The enactment of the 2011 Water Resources Management Act recognized groundwater as a public good, which since Zambia's independence, had never been subjected to regulation. But groundwater is a finite resource, susceptible to over utilization, contamination and depletion and therefore requiring regulation.

Despite the coming into force of the 2011 Water Resources Management Act, regulation of groundwater could not be actualized because there were no Statutory Instruments (SIs) to operationalize the principal Act. It is against this background that the Government through the Ministry of Water Development, Sanitation and Environmental Protection and the Water Resources Management Authority started the development of regulations in 2015 through a robust participatory and consultative process involving various key stakeholders. The process

commenced with consultative meetings at national, sub-national level followed by sector meetings involving agriculture, mining, industries, municipal and hydropower over a period of two (2) years from 2015 to 2017. The outcomes of these consultations were taken into consideration recognizing varying needs of stakeholders. Following this process, the three Statutory Instruments were developed and a Regulatory Impact Assessment of the regulations was undertaken in line with requirements of the Business Regulatory Review Act No. 3 of 2014 and consequently approved by the Business Regulatory Review Agency (BRRRA).

The Water Resources Management Authority wishes to reiterate that water resources management and development remains a priority in fostering economic diversification and job creation as well as enhanced human development in order to contribute to the country's sustainable development. WARMA will continue to engage stakeholders to ensure the effective and efficient management of the Water Resources in the Country.



Mr Lemmy N Namayanga  
Acting Director General



## Why it is Necessary to Manage Water

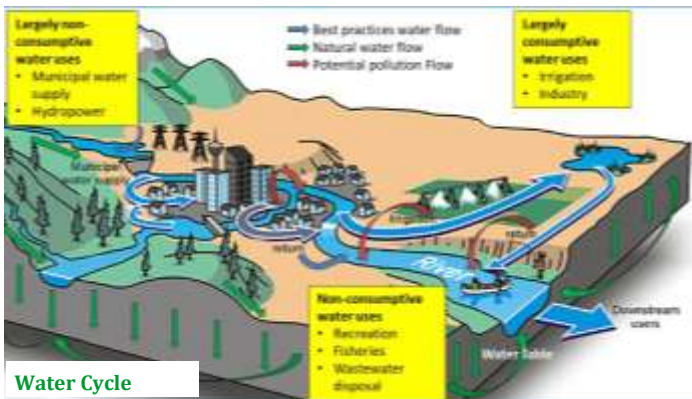
Zambia depends on groundwater: 60-70 percent of all water used in the country comes from this source. Even though the country is richly endowed with a lot of water in the form of rivers, lakes and swamps, its agriculture is mostly rain fed. At the same time, Zambia's electricity sector is heavily reliant on hydropower (over 95%). The country's citizens and industries rely on the valuable resource for daily life and operations.

Access to water is a basic human right which is often threatened when the resource is not properly managed and not available in adequate quantities and/or quality. Water as an economic good contributes to the prosperity of a nation. Water-related conflicts and disputes in Zambia are already apparent due to competing uses, namely domestic, the environment, commercial agriculture, hydropower and mining. Therefore, water has to be managed by a neutral authority to ensure equitable access for all user groups and prevent and

mitigate further conflicts.

The need for professional management structures particular applies to groundwater which, until now, was not regulated in Zambia at all. However, this has had negative impacts on both the quantity and quality of groundwater in Zambia. This problem is more severe in larger urban areas like Lusaka with its many unplanned settlements where boreholes are often in very close proximity to septic tanks and pit latrines. Although groundwater is underground, it is still highly susceptible to contamination through seepage from sources above ground, such as sewage, rubbish and industrial waste. It is this very contamination which contributes to public health problems such as cholera and other diseases.

It is these and other problems that the borehole regulations aim to remedy. For example, the regulations on groundwater and boreholes will tackle the issue of groundwater protection in order to improve both the quality and the distribution of the resource. In terms of water quantity, it is the indiscriminate



drilling of boreholes which is the culprit. The regulations will improve water quality by, for instance, ensuring boreholes are not too close to sources of contamination. The SI that regulates drilling companies will, furthermore, improve the quality of the boreholes to be drilled, thereby reducing the instance of defective or collapsed boreholes.

Since surface and groundwater are interlinked, groundwater management and protection is a fundamental aspect of sustainably managing the water resources of the nation. Therefore, protecting and managing these water resources will not only ensure its availability now but also in future. In essence, “you can’t manage what you don’t know!”

### **Water Management as Part of a Sustainable Future**

According to the Seventh National Development Plan (2017-2021) there is a strong correlation between economic growth, industrial growth and water consumption. According to SADC, 14 percent of the total annual renewable water resources in the SADC region are stored, compared to 70-90 percent in most industrialised regions.

In addition, effects of climate change already have had a serious negative impact on Zambia’s water resources availability, mainly due to inadequate water resources infrastructure and management. As a result, the country continues to experience low water levels causing load shedding of electricity, consequently adversely affecting production. According to a report by the Indaba Agricultural Policy Research Institute, economy-wide annual losses due to load shedding in Zambia amount to 32.5 ZMW billion (representing 18.8 % of GDP) while losses to the agriculture sector are estimated at 2.83 ZMW billion (representing 1.6 % of GDP).

Paying for water emphasizes the value of the resource and



encourages measures to protect future access. Of course, the community right to drinking water and ensuring sufficient flow to maintain the environmental values needs to be sanctified.

To avoid conflicts and manage water resources properly, the World Bank, as far back as 2005 recommended the establishment of organisations whose core functions are “to determine the best set of policies and investments to manage water resources (storage, extraction, quality, flood protection, transfers) and to manage the process of allocation among sectors.”





## How WARMA helps to Manage Zambia's Water Resources

WARMA is part of a wider structure established by the Water Resources Management Act No. 21 of 2011. Over the years, Zambia's water sector has undergone reforms. The two phases of water sector reforms in Zambia commenced in the late 1980s and early 1990s respectively. This led to the development of the National Water Policy of 1994, which provided guidelines for reorganising the sector into two sub-sectors, namely;

- › The Water Supply and Sanitation Sub-sector
- › The Water Resources Development and Management Sub-sector

The National Water Policy was later revised in 2010. This was then followed by the second phase which was the enactment of a new Water Resources Management Act No. 21 of 2011,

which replaced and repealed the Water Act of 1949 which offered a very limited approach to water resources management. The emerging focus in WRM has prioritized decentralization using the catchment as a management unit in recognition of the unity of the hydrological cycle. This approach will also help to manage water directly where it is located and needed. The Water Resources Management Authority (WARMA) was established under the Water Resources Management Act No. 21 of 2011. Its main purpose is to serve as the regulatory body for the management and development of water resources in the whole country and ensure equitable access to water for the various stakeholders.

Based on the principles of Integrated Water Resources Management, WARMA also takes gender and climate change dimensions into account when performing the following key organizational functions:

- › Ensure the sustainable and rational utilization, management and development of water resources.
- › Establish and maintain an integrated water resources management information system that is easily accessible by all users.
- › Provide access to water resources of acceptable quality and quantity for various uses.
- › Set standards and guidelines for undertaking water resources management and development.
- › Provide comprehensive advice to the Minister responsible for water on policies for utilization, management and development of water resources.

## WARMA's Mandate

Based on this objectives WARMA's mandate includes various tasks and responsibilities. The organisation will therefore:

- › exercise control over all water resources in Zambia
- › monitor & regulate water use to ensure equitable allocation
- › define Water Resources Management Regulations and disseminate them to the public
- › plan, review and approve water use plans in catchments and sub-catchments
- › allocate water entitlements and apportion water to the various users of the water resource after a decentralised decision making process has been undertaken.
- › take over the functions of the Water Board as well as the water resources management functions that were previously under the then Department of Water Affairs
- › support the operations of Catchment Councils and Sub Catchment Councils
- › facilitate the establishment and support of Water User Associations
- › regulate the construction of surface & ground water infrastructure (dams, gauging stations, boreholes, etc)
- › preside over possible water conflicts or disputes
- › manage all water resources management infrastructure and monitor their use

## Core Values

For WARMA to effectively deliver its mandate, it has adopted a guiding philosophy with six core values. These form the acronym "TADIES" and are to be the foundation of its organisational culture. These values will ensure a consistent operation mode in the whole structure. WARMA's personnel is expected to reflect the collective exposition of the Authority as follows:

- › **Transparency** - in all operations, including the water permitting process
- › **Accountability** - to all stakeholders within their hierarchy of priority so that confidence levels are continuously strengthened and cemented for both the organisation and individuals in order to foster continued flow of resources to and from WARMA
- › **Dynamism** - equipped with an inspiration that compels WARMA staff to always be active and with a sense of urgency thus assuring to meet all deadlines and conditions negotiated regarding all their deliverables
- › **Innovation** - in service delivery throughout the value chain in order to safeguard and enhance performance levels envisaged within its strategic plan
- › **Equity** - in service delivery to assure access to water and equity through equitable allocation of water resources
- › **Sustainability** - in service delivery, ensure consistent beneficial change in access to the services that leads to corresponding long-lasting outcomes and impacts in people's lives

# Development of the Statutory Instruments



On 7<sup>th</sup> March 2018 the Minister of Water Development, Sanitation and Environmental Protection, Hon. Dr. Dennis Wanchinga signed and issued the new regulations on Drillers, Boreholes, and Groundwater, as well as one on Charges and Fees. These regulations were the outcome of a long consultative process with multiple stakeholders, including Drillers, Commercial Farmers, Mining, Hydropower companies, Industrial Companies, the general public and various other interest groups.

The public consultation started with the meeting for stakeholders in April 2016 followed by a series of thematic stakeholder meetings for Farmers, Hydropower, Industry, Mines and Municipal water users in Choma and Mkushi (March 3 to 18, 2017). The result of these meeting was a revision of the initially proposed Fees and Charges following the advice of the various stakeholder. This reduction in the final SI was due to the feedback WARMA collected from the stakeholder meetings.

## The Statutory Instruments

The Minister of Water Development, Sanitation and Environmental Protection Hon. Dr. Dennis Wanchinga signed the following three Statutory Instruments in Lusaka.

- › **Statutory Instrument 18 of 2018**  
Charges and Fees
- › **Statutory Instrument 19 of 2018**  
Regulations on Licensing of Drillers and Constructors of Other Water Works Regulation
- › **Statutory Instrument 20 of 2018**  
Regulations on Groundwater and Boreholes



## **Statutory Instrument 18**

### **Charges and Fees**



The SI 18 of 2018 provides for the following;

The SI provides charges and fees for all economic uses of water such as hydropower, agriculture, mining, industries and municipal as well as non-extractive uses such as recreation and navigation. It was last revised in 1990.

In line with Government Policy of improving access to water and sanitation, the SI has provided exemptions from charges and fees for domestic and non- commercial use of water up to 10,000 liters per day per household. Furthermore, the SI has also provided for a fixed charge of K5.00 for agricultural use of water of up to 100,000 liters per day.

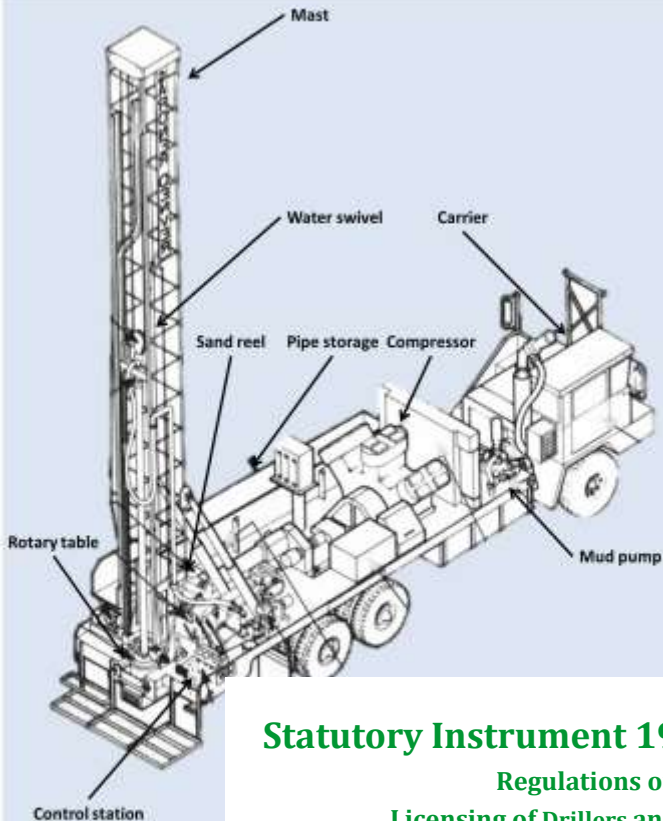
Specifically, Government issued the Statutory Instrument No. 18 to;

- › Safeguard the general public from exploitation against substandard Boreholes susceptible to collapsing, silting and drying up
- › To defray administrative costs related to the service of management of the water resource

The above measures are meant to safeguard both ground and surface water resources which is critical for fostering economic development and wellbeing of the general public. The SIs will also help curb the recurrence of water borne diseases such as cholera and other diarrhoeal diseases.

### **General Offence**

A person who contravenes this Regulation commits an offence and is liable, on conviction, to a fine not exceeding one hundred thousand penalty units.



## **Statutory Instrument 19**

### **Regulations on Licensing of Drillers and Constructors of other Water Works**

The SI 19 of 2018 provides for the following;

### **Licensing of Drillers**

- › A person who intends to engage in the trade or business of drilling borehole shall apply for license to the Authority on payment of prescribed fee set out in Statutory Instrument No. 18 of 2018 on Fees and Chargers within 30 days
- › The Board shall, where it authorizes or rejects application, inform the applicant

### **Revocation of License**

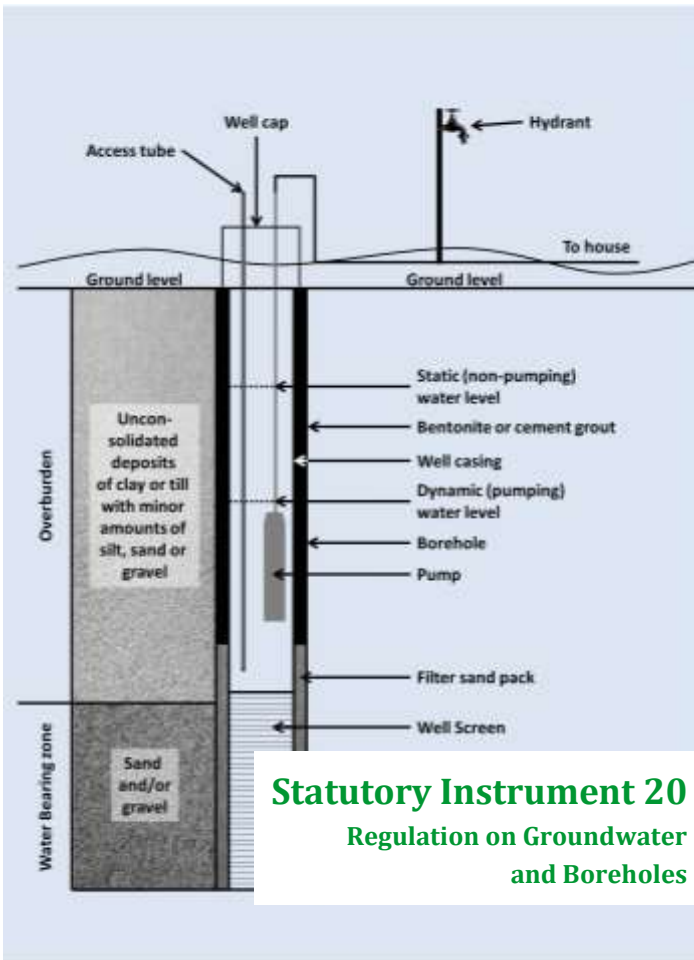
- › The Board shall, where a license violates the conditions of a license, revoke the license

### **Register of Constructors, Drillers and Engineers**

- › The Authority shall, establish and maintain a register of Constructors, Drillers and Engineers who must be registered with the Engineering Institution of Zambia at a nominal fee of K250 annually
- › A Constructor, Driller and Engineer shall notify the Authority where there is a change of particulars of a Constructor, Driller and Engineer within fourteen days of their change

### **General Offence**

- › A person who contravenes this Regulation commits an offence and is liable, on conviction, to a fine not exceeding one hundred thousand penalty units



## Statutory Instrument 20

### Regulation on Groundwater and Boreholes

The SI 20 of 2018 provides for the following;

### **Notice to drill**

- › Any person who intends to drill a borehole shall give notice to WARMA and apply upon payment of an application fee of ZMW250.00 (for domestic use) or ZMW 500.00 (for commercial use) as one off payment
- › The Authority shall respond the applicant within 30 days

### **Location of Boreholes**

- › A Driller shall ensure that the location of the borehole meets the minimum distances to pollution sources

### **Specification of Borehole**

- › A Driller shall ensure that a successful borehole is installed with the following: full casing from the top to the bottom, grave pack, bottom plug and sanitary seal
- › A driller shall ensure that an unsuccessful borehole is capped and backfilled with grout within twenty four hours
- › Domestic users abstracting 10 m<sup>3</sup> or 10,000 liters per day will not be required to pay any fees and charges apart from a one off payment of K250.00 for registering
- › For Commercial groundwater users, they henceforth need to apply for abstraction permits

### **Transition Provisions and General Offence**

- › A person who had a borehole before, shall register that borehole within six months
- › A person who contravenes this Regulation commits an offence and is liable, on conviction, to a fine not exceeding one hundred thousand penalty units

# ANNEX I

## Important Fees & Tariffs

### Fees

Name	Amount	When to pay
Borehole registration fee	ZMW 250.00 (domestic)	Once of payment
	ZMW 500.00 (commercial)	
Registration fee for drillers	Based on class and nationality	Annually
Construction of water works/dams	ZMW 1,000.00	Based on contract
	ZMW 3,500.00	Based on contract
	ZMW 10,000.00	Based on contract
	ZMW 20,000.00	Based on contract

### Charges

Name	Amount	When to pay
Charge for abstraction of groundwater	No payment	- - -
	ZMW 0.0048/m <sup>3</sup>	Annually and based on abstraction

## Explanation

This fee covers the administrative costs of a borehole to be registered with WARMA. In return WARMA will provide guidance and integrate the borehole into the national register to predict future groundwater levels as well as measure the water quality of the borehole.

The Authority shall, establish and maintain a register of Constructors, Drillers and Engineers to ensure quality of works.

Storage capacity up to 200,000m<sup>3</sup>

Storage capacity between 200,000m<sup>3</sup> and 500,000m<sup>3</sup>

Storage capacity between 500,000m<sup>3</sup> and 1,000,000m<sup>3</sup>

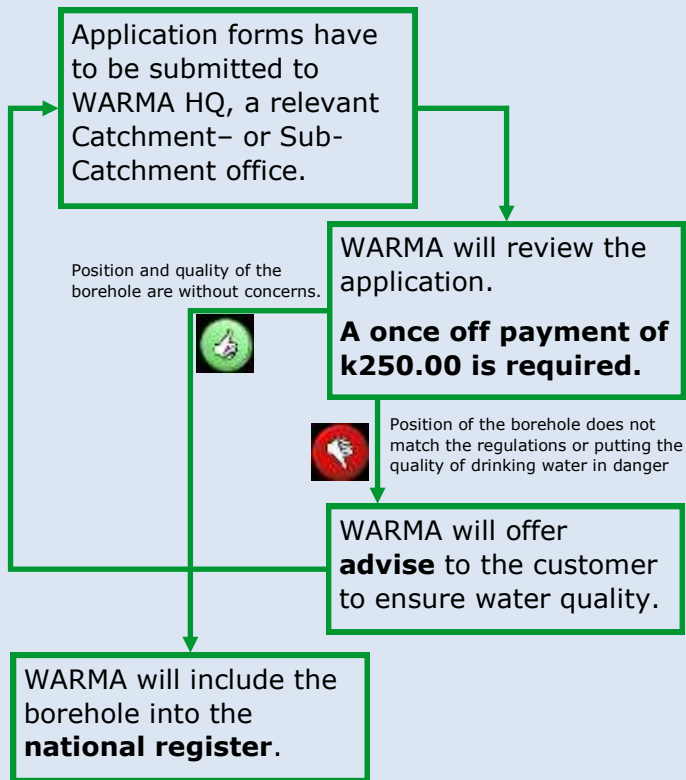
Storage capacity above 1,000,000m<sup>3</sup>

## Explanation

No charges for domestic use up to 10,000 m<sup>3</sup> water per day

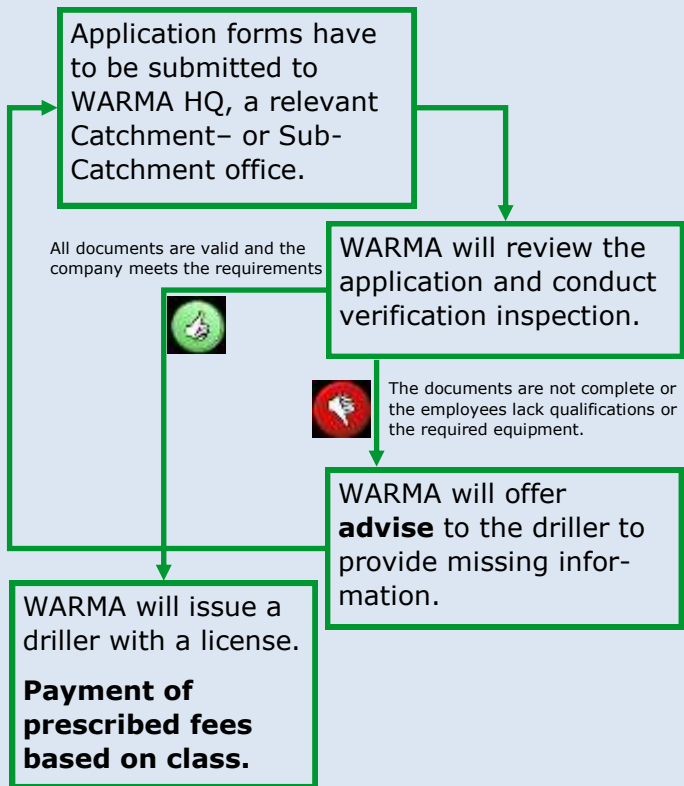
The charge for commercial use over 10,000 m<sup>3</sup> per day highlights the importance of the resource for the economic and social development of Zambia. It allows WARMA to fulfill its function which is critical for fostering economic development and wellbeing of the general public.

### Application for the registration of a borehole





## Application for the registration of a drilling company



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