RAINWATER HARVESTING REGULATIONS

A Regulation to provide a framework for rainwater harvesting in Grenada and for related matters]

Authority: The Minister in exercise of the powers conferred on him by section 61 of the Physical Planning and Development Control Act, No. 25 of 2002 hereby makes the following Regulations–

Gazetted on: 2026

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A REGULATION to provide a framework for rainwater harvesting in Grenada and related matters.

PART I

PRELIMINARY

Regulation 1 - Citation and Purpose

1. (1) These Regulations may be cited as the *Rainwater Harvesting Regulations, 2026*.

(2) The purpose of this Regulation is to;

(a) regulate rainwater collection, storage and discharge systems and

(b) to regulate the procedures and principles regarding the planning, design, project preparation, construction, safety and operation of rainwater harvesting systems.

(3) This Regulation shall cover the procedures and principles regarding

(a). the planning, design, project preparation, construction and operation of rainwater collection, storage and discharge systems

(b). public health and safety

(c) the design, maintenance, and use of the physical environment to prevent harm, injuries, and accidents;

(d.). protection of the environment

(e). sustainability of the system and

(f).protection of non potable and potable water from contamination.

This section provides for the name of the regulation, and the purpose which it is designated to serve.

Regulation 2 - Interpretation

2. In these Regulations -

“agriculture” means the science or practice of farming, including cultivation of the soil for the growing of crops and the rearing of animals;

“aquifer” means a geological structure or formation or an artificial landfill permeated or capable of being permeated permanently or intermittently with water ;

‘Authority’ means Planning and Development Authority as constituted under section 5 (1) of the Physical Planning and Development Control Act No 25 of 2002, and has responsibility regarding planning and development in this Island;

‘body corporate’ or ‘company’ means a legal or juridical person or arrangement, including all legal persons and legal arrangements, under these Regulations or any other law;

“catchment’ means the component of a rainwater harvesting system from which rainwater is collected including building rooftops, roads and pavements;

“cistern” means a receptacle for holding water typically integrated as a structural part of a building;

“conveyance system” means the components of the rainwater harvesting systems including gutters, pipes, filter screens and first-flush diverters;

‘Court’ means any court or tribunal body in Grenada;

“domestic” means relation to household or family needs;

“down-pipe” means the pipe that caries water from the gutter down to the storage;

“Environmental and Social Impact Assessment” means an examination, analysis and assessment of planned activities with a view to ensuring environmentally sound and sustainable development in line with section 2 of the Physical Planning and Development Act;

“first-flush diverter” means a simple installation that is part of the down-pipe, designed to remove the initial wash or “first-flush” that is sometimes laden with dirt, soot, animal droppings (when it first starts raining after a dry period) off the roof so that this contaminated water does not enter the tank.

“gallons” means the metric volumetric unit unless otherwise stated;

“groundwater” means all water naturally stored or flowing below the surface of the ground and not apparent on the surface of the ground and includes water occurring or obtaining in or obtained from any bore or aquifer;;

“gutter” or ‘guttering’ means a channel installed along the edges of a roof or catchment to collect and direct rainwater away from the building to the rainwater tank or cistern;

“industrial” means means any activities and process for the production or repair of goods;

‘m 2’ means square meters

‘Minister’ means the Minister with responsibility for [Planning];

‘NAWASA’ means the National Water and Sewerage Authority

‘non-potable water’ is water that is not safe or suitable for human consumption, but can be used for cleaning, washing, irrigation and other purposes as prescribed in this Regulation;

“potable water” means water which is for the purposes of human consumption;

"premises" refers to a piece of land and the buildings or structures permanently attached to it;

‘rainwater harvesting’ means the means the process of collecting, storing and utilizing rainwater from any catchment area;

“reservoir” means a natural or artificial body for collection of rainwater;

“runoff” means the portion of precipitation that flows over the land surface and makes it way into streams, rivers or other water bodies;

‘sf’ means square feet

“Tribunal” means the Physical Planning Appeal Tribunal established under section 28 of the Physical Planning and Development Control Act;

“turbidity” means suspended solids, such as silt, clay, organic matter and mircoorganisms; and

“water tank” means a container or structure for storing water.

This section provides the various definitions and terms for interpretation throughout the regulation.

PART II

DESIGN, PLANNING AND APPROVAL REQUIREMENTS

Regulation 3 - New buildings

3. (1) Every new [domestic] building which has a gross floor area of at least [250 square feet or 23 square metres, but less than [ ] square feet or [ ] square metres from the commencement of this Regulation, shall be equipped with a rainwater harvesting system, as described in the First Schedule.

(2) For the purpose of this section, a building is considered a new building when [it has its plans approved for construction or alteration from the date of the commencement of this Regulation].

(3) The owner of premises on which a new [domestic] building is to be constructed shall submit to the Authority, a design or a plan for a water harvesting system.

(4) The [size] [type] of rainwater harvesting system for domestic buildings shall be of a size which corresponds to the measurements of the building as set out in *First Schedule*.

(5). All premises with new buildings which has or will have

(a.) a gross floor area of at least [ ] square feet or [ ] square metres or more

(b) [three] or more cottages or dwelling houses on the premises;

(b.) has 10 or more users of water per day

shall be considered as buildings for commercial, industrial, institutional or governmental use.

(6) All new government public infrastructure, wherever applicable, shall pursue the construction of rainwater harvesting systems.

(7). All new commercial, industrial, institutional or governmental use buildings shall include in their design submission to the Planning and Development Authority, an appropriately sized rainwater harvesting system, in keeping with the *Second Schedule*.

(8) The use of rainwater harvested under this section shall be used for non-potable purposes, unless treated in accordance with [Regulation 15] for potable use.

(9) Any person who commits an offence under this regulation is liable to a fine of [ten thousand dollars] or [ ] months in prison, or to both.

(10) A body corporate which contravenes this section shall be liable to a fine of not less than [one thousand dollars] nor more than [two hundred and fifty thousand dollars].

All new buildings of the prescribed size are expected to have rainwater harvesting systems, with certain measurements as prescribed in the First and Second Schedule.

This is expected to become mandatory upon commencement of the Regulation.

Regulation 4 - Existing buildings

4. (1) All existing inhabited buildings and used facilities, which has a gross area of [250 sf or 23 square metres or more] are required to install rainwater harvesting systems as stipulated in the *First and Second Schedule,* [within 5 years] from the date of enactment of this Regulation, unless exempted under Regulation 5.

(2). The owner or occupier of an existing [domestic] building which has a gross area of at least [250 square feet or 23 square metres,) shall install a rainwater harvesting system of such specification as set out in the *First Schedule* for domestic buildings.

(3) The owner or occupier of an existing building which has a gross area of [ ]square feet or [ ] square metres or more, shall install a rainwater harvesting system of such specification as set out in the *Second Schedule for industrial, commercial or institutional building*.

(4) The Authority may adopt a phased approach and extension of time for implementation of rainwater harvested systems, where warranted.

(4) Any person, except those who have received an extension of time, or are exempt under regulation 5 of these Regulations, who fails to install a rainwater harvesting system as described under subregulations (2) and (3), after 5 years from the date of the enactment of this regulation, commits an offence.

(5) Any person who commits an offence under this regulation is liable to a fine of [five thousand dollars] or [six] months in prison, or to both.

(6) A body corporate which contravenes this regulation shall be liable to a fine of not less than [one thousand dollars] nor more than [one hundred thousand dollars].

This section provides that as long as an existing building is at least 250 square feet, it is expected to install a rainwater harvesting system within five years of the passage of this Regulation, with penalties for non compliance.

Regulations 5 - Exemption

5. (1) Domestic premises with a measurement of less than 250 square feet or 23 square metres may be exempt from these Regulations.

(2). An owner or occupier of domestic premises with, or likely to have, a gross area of at least 250 square feet or 23 metres but less than [ ] square feet or [ ] square metres],) who wishes to be exempt from the installation of rainwater harvest system under Regulations 3 and 4 shall, in writing, apply to the Planning and Development Authority for an exemption.

(3) An application for an exemption made under subsection (1) shall state the reasons for the exemption.

(4) The Authority shall, within [ ] days of receipt of the application for exemption, determine the application.

(5) Where it is made to appear to the Authority–

(a) that it is not practicable—

(i) to gutter the roof of a building for catching rainwater; or

(ii) to provide a ground catchment having the prescribed area; or

(iii)to provide a tank or tanks having the prescribed capacity; and

(b) that the building can in the opinion of the Authority, be adequately supplied with drinking water from a main piped supply

the Authority may, subject to such conditions and restrictions as it may think proper to impose, allow the owner or occupier of the building to be exempt from regulation 3 and 4 of these Regulations.

(6) In determining the application for exemption, the Authority shall determine its own guidelines, and may have regard to -

(a) [extenuating circumstances as the Authority determines as reasonable]

(b) [persons under a welfare or social benefits programme in Grenada;

(c) vulnerable persons;

(d) the condition, location, shape and measurements of the premises; and

(e) physical and environmental safety.

(7) A person shall not require a water abstraction license under the Water Resources Management and Regulation Act -

(a). to harvest rainwater into a reservoir or water tank, with or without an overflow, if it only contains collected rainwater

(b). to use harvested rainwater that has not entered inland surface waters or groundwater;

(d) in situations that may fall under section 25 (2) of the Water Resources Management and Regulation Act or

(c). to use water stored for irrigation in a reservoir with an overflow, provided that the reservoir is only filled by harvested rainwater

as long as the rainwater harvested does not come from a potable source.

This section provides for exemptions from installing a rainwater harvesting system, such as size and suitability of premises. It also indicates, to avoid conflict with the upcoming Water Resource Management and Regulation Act, that a person can harvest rainwater without needing a water abstraction licence..

Regulation 6 – Authority can provide assistance to enable compliance

6 (1) The Authority may, in conjunction with other relevant public authorities, assist any person owning or occupying premises who the Minister has determined are physically or financially unable to comply with regulation 3 or 4 of these Regulations.

(2) The Authority may adopt a phased approach, which may include extension of time where warranted, to encourage compliance for owners and occupiers of domestic, commercial, industrial and institutional buildings.

The provision provides for assistance for such persons who may be in need of assistance to meet requirements.

Regulation 7 - Composition of a Rainwater Harvesting System

7.. A rainwater harvesting system may comprise of

(a). a catchment area consisting of a

(i). roof

(ii). pavement

(iii) open tanks or

(iv). similar structure as approved by the Authority;

(b). a conveyance mechanism consisting of

(i). guttering

(ii).gullies

(iii). channels

(iv).pipes

(v). first flush system or

(vi). diverter

(c). a water storage tank or cistern in the form of

(i).plastic, polyethylene, stainless steel, fiberglass, concrete, galvanized steel or carbon welded steel;

(ii) concrete cisterns;

(iii) surface ponds or

(iv) similar structures as approved by the Authority

and

(d.). a delivery/distribution system in the form of

(i) pumps

(ii) pipes

(iii) taps or

(iv) hoses.

This section provides the various types of rainwater harvesting systems that can be implemented in Grenada.

Regulation 8 - Structure to facilitate system

8. (1) Where it is necessary for a structure to be constructed to facilitate the installation of a rainwater harvesting system, a drawing shall be prepared by

(a). an engineer as approved by [the Grenada Institute of Professional Engineers or][the Authority];

(b) an architect

(c) certified draftspersons

(d) any other person as authorised by the Authority, such as certified plumbers or

(e) any other person as designated by rules or guidelines to these Regulations.

(2) The owner of the premises on which the structure is to be constructed shall submit to the Authority, the appropriate drawing referred to in subregulation (1) for approval.

(3) The design and drawings for all new water tanks, that

(a). have a storage capacity greater than 45,500 Litres or 10,000 imperial gallons or its length, width, or diameter greater than 20ft or 6 metres, or

(b)its height greater than 10ft or 3 metres

shall be checked by an engineer as referred to in subregulation (1) (a).

(4) All tanks or cisterns which shall have a storage capacity greater than 227,300 litres (50,000 imp. gallons), shall be designed by a certified engineer as designated by the Planning and Development Authority.

(5) An Environmental and Social Impact Assessment shall be attached to the application documents to be submitted to the Authority, for

(a). any tank or cistern that will have a storage capacity greater than 910,000 litres (200 000 gallons); or

(b). any matter related to section 25 or the Second Schedule of the Physical Planning and Development Control Act.

(6) Notwithstanding regulation 3 of these Regulations, the Authority may request an Environmental and Social Impact Assessment for any proposed rainwater harvesting system, where the Planning and Development Authority deems such necessary due to any matter relating to high risk or uncertainty.

This section provides for that only select professionals can draw or design the rainwater harvesting system. The drawing has to be submitted to the Authority by the owner or occupier of the premises; in terms of law, the professional should be able to facilitate the submission on the owner/occupiers' behalf as well.

PART III

GOVERNANCE AND ADMINISTRATION

Regulation 9 - Statutory responsibility for these Regulations

9. (1) The Authority, shall be responsible for the administration of these Regulations.

(2) The Authority, in executing its responsibilities under this Regulation, shall liase with

(a). the Minister

(b.) the National Sewerage and Water Authority (NAWASA)

(c). the Ministry with responsibility for Health

(d.). the Ministry with responsibility for the Environment

(e) the [Ministry] [Authority] with responsibility for Carriacou and Petit Martinique Affairs and Local Government;

(f) The Water Resource Management Unit;

(g) the Public Utilities Regulatory Commission or

(h). any other relevant statutory, public or private entities as required.

(3) All drawings submitted to the Authority related to these Regulations shall be subject to the fees, approval times and processing as stipulated by the Physical Planning and Development Control Act of Grenada or any other law, rules or guidelines as stipulated by the Authority.

The Planning and Development Authority has the responsibility for the administration of the Regulation. The body is also required to liase with the Minister of [Health], NAWASA, the Water Management Unit, as well as any other relevant bodies, such as environmental protection, planning, meterology etc

Regulation 10 - Inspection Officers

10. (1) The Authority shall , under its powers by section 55 of the Physical Planning and Development Control Act, appoint any person, for the purposes of inspection or supervision of compliance with these Regulations.

(2) Inspectors may, at any reasonable time, enter any premises in Grenada and require any owner or occupier of those premises to:-

(a). answer any question related to rainwater harvesting to the best of that person's knowledge, information and belief;

(b). produce any document or record that is reasonably required for ascertaining whether those provisions are being complied with, and examine that document or record; or

(c) comply with any order by the Court or Tribunal.

(3) Inspectors, on the instructions of the Authority, may enter any premises in Grenada and

(a.). make copies of or take extracts from such document or records;

(b). remove the document or record for as long as is reasonably necessary to make copies or for some incidental action;

(c.). take pictures, images, print or make photocopies

(d). operate, or require assistance from any person to operate, any computer or other electronic equipment on the premises to monitor data in relation to these Regulations or

(g). carry out any order by the Court or Tribunal.

(4) The owner or occupier of the building shall facilitate the actions undertaken by the inspector, and comply with the inspector's instructions.

(5) In the event that the owner or occupier does not grant access to the building, the inspector shall seek the support of [the police].

This section provides the powers of inspectors and places an obligation on owners and occupiers of buildings to comply.

Regulation 11 - Public officers to assist inspectors

11 (1) Inspectors may seek any information or assistance from another public officer, including the officer of any statutory body, police force, armed forces, Ministry or Agency, to exercise their functions as recognized in these Regulations.

(2) The public officer shall provide the requisite information or assistance called for under subsection (1) to the inspector without any delay.

(3) Where required, the Planning and Development Authority may seek regional and international assistance with regard to any matter with regard to enforcing compliance with these Regulations.

This provision is important as it allows for domestic cooperation by any public officer. As a result, it may not only call for assistance by the police, but possibly customs, health, port and food safety authorities, thus ensuring a wide cross section of assistance by this regulation.

It also goes further to enhance the international cooperation provision in relation to the Competent Authority, where regional and international assistance can be enlisted where necessary.

Regulation 12 - Technical specifications

12 (1) The Authority, upon consultation with NAWASA, shall approve the technical specifications for rainwater harvesting devices, as well as the manner of their application.

(2) Uniform standards shall describe:

(a). the size, shape, pattern and composition of rainwater harvesting devices;

(b). the numbering system and identification codes to be used by the Authority and

(c.). any other elements to describe devices in terms of these Regulations.

(3) The Planning and Development Authority may approve different standards for different rainwater harvesting devices.

(4) Drawings summitted for approval under these Regulations, shall provide sufficient details for the construction and or installation of the appropriate rainwater harvesting system.

The Competent Authority, by this section, is in charge of the approval of the relevant technical specifications of the devices, particularly with regard to issuing uniform standards. This provision also indicates that the Competent Authority may also approve different standards for different devices.

PART IV

RAINWATER QUALITY REQUIREMENTS

Regulation 13 - Non potable rainwater

13. (1). All non potable rainwater may undergo a primary treatment.

(2) A first flush system may be used in conjunction with the filtration of rainwater harvested by

(a) grills

(b) gratings or

(c.). mesh

to prevent debris and other foreign matter from entering the storage chamber.

(3). All rainwater harvested shall be non potable usage, that is, for the purposes of

(a). domestic use, which includes

(i).use in toilets

(ii).laundering clothes and

(iii).scrubbing and cleaning

(b). agriculture, for the purposes of

(i).feeding crops

(ii).feeding animals

(iii).cleaning of equipment and facilities or

(iv)use in toilets and laundering

(c.). industrial commercial and institutional purposes, including

(i).use in toilets

(ii).laundering clothes, especially in the hotel industry;

(iii). scrubbing and cleaning;

(iv).landscaping or

(v).mechanical cooling.

(4) All owners and occupiers of buildings shall prevent any contaminants from getting into the rainwater storage by

(a). using sealed tanks and cisterns,

(b). isolating rainwater conduits from any other conduits, and

(c.). isolating mechanical or motorised parts from getting in contact with the harvested rainwater.

(5). No rainwater harvested in mainland Grenada shall be declared safe for drinking or cooking purposes by any authority in Grenada, unless the harvested rainwater is treated in accordance to regulation 15 below.

(6) Subregulation (5) above shall not apply for the islands of Petit Martinique, Carriacou or the Grenada Grenadines Islands.

(7) Any person in mainland Grenada who knowingly provides non potable rainwater to another person for potable use that has not been treated in accordance with regulation 15 commits an offence.

(8) No wastewater connection shall be made to any rainwater channel for any reason.

This section provides for storage of non potable rainwater and indicates its various usage. It also makes it an offence for a person to knowingly give another person non potable harvested rainwater for drinking or internal consumption.

Section 14 - Agricultural Rainwater Harvesting Systems

14.. (1)Agricultural facilities that have, will have, or are likely to have, buildings, roofs or catchment-like surfaces, may install a rainwater harvesting system with a storage tank.

(2) The storage tank installed at the agricultural facility may be able to contain 250 litres or 5 gallons per square feet per every square meter of roof space.

(3). Owners and occupiers of agricultural facilities may, with the assistance of a design professional, implement specially designed and maintained surface ponds or reservoirs for rainwater harvesting purposes.

This section provides additional specific considerations for agricultural rainwater harvesting, particularly with regard to facilities.

Section 15 - Rainwater for drinking

15. (1) All potable rainwater shall undergo a primary treatment, such as a first flush system.

(2) Rainwater may be used for potable purposes if it is collected

(a) using regularly clean surfaces, which are

(i) not used for vehicular activity and
(ii) which are not in close proximity, that is, further than 0.5km or 0.3 miles, to industrial exhaust systems.

(2) The catchment for potable rainwater shall be constructed from materials deemed safe for potable use such as:

(i) Portland cement concrete surfaces;

(ii) galvanize and galvalume with non-toxic baked or enamel finish;

(iii) clay tiles;

(iv.) slate;

(v.) nontreated timber;

(vi). plastic;

(vii). polyvinyl chloride (PVC);

(viii) polyethylene (PE); or

(ix). any other non-toxic material deemed safe by a licenced engineer [trained professional in the related field].

(3) All rainwater harvested for potable use shall be filtered and purified by means of –

(a). screens, filters and first-flush systems;

(b). boiling, distillation, iodization, and chlorination from any other rainwater harvesting mechanisms to eliminate bacteria, viruses, and other harmful microorganisms.

(c.). other filtration and purification processes to eliminate contaminants and pathogens or

(d.). any other manner approved by Authority upon consultation with NAWASA or the Ministry of Health.

(4) Advanced filtration methods, such as sand or activated carbon filters, may be used to further improve the water quality of harvest rainwater for drinking and consumption purposes.

(5) No person shall use rainwater for potable use if it is collected on the following surfaces:

(a) asphalt or tarmac;

(b) treated wooden surfaces;

(c) asbestos coverings;

(d) metal sheeting covered with lead-based coatings or other toxic coating;

(e) corroded or rusty surfaces;

(f) surfaces with chemical treatment or

(g). any other surface as determined by the Authority or the Ministry of Health.

(6) Any industrial, commercial or institutional premises which wishes to use harvested rainwater for potable use must have the written approval of the Ministry of Health; except

(7) – The islands of Carriacou, Petit Martinique, and the Grenada Grenadine Islands which utilize traditional rainwater harvesting practices, are exempt from Regulation 15.

The methods to use harvested rainwater for drinking are provided under this Regulation. The approval of the use of such water for drinking after the relevant treatment must come from the Authority. This section also addresses the requirements for catchments in relation to developing drinkable water from harvested rain water.

Section 16 - Labelling

16. (1) All industrial, commercial, and institutional premises, buildings and establishments shall label all non potable rainwater in order to prevent the drinking or consumption of harvested rainwater.

(2) Each device containing non potable harvested rainwater in the possession of such entities in subregulation (1) shall have a clearly legible label with

(a). the word '**RAINWATER'** printed on in green text or

(b). the words **"Not Drinking Water"**

to clearly illustrate that it is non potable rainwater being supplied.

(3) All pipework used in rainwater harvesting by industrial, commercial and institutional premises, buildings and establishments shall be easily identified as a rainwater pipe for non potable use and may

(a). either be labelled or

(b). use unique patterns which is distinguishable from any pipes which supply potable or drinking water.

Labelling is required under this section by commercial, industrial and institutional buildings and establishments, in order to distinguish non potable rainwater from other water sources.

Regulation 17 - Fiscal Incentives for Rainwater Harvesting Systems

(1). The Minister responsible for finance may establish fiscal incentives, including duty or tax reductions, rebates, or grants, to promote the installation of approved rainwater harvesting systems.

(2). In administering fiscal incentives, priority shall be given to making such systems accessible and affordable to low-income and vulnerable households, including the elderly, persons with disabilities, female-headed and single-parent households, as well as communities in water-stressed areas.

(3). The Minister [with responsibility for finance], in collaboration with the Ministry responsible for Carriacou and Petit Martinique Affairs, may prescribe, by order published in the Gazette, eligibility criteria and procedures for accessing fiscal incentives under this regulation.

This Regulation provides a foundation for the Minister of Finance to provide fiscal incentives for the rain water harvesting regime.

PART V

MISCELLANEOUS AND FINAL PROVISIONS

Regulation 18 - Performance and evaluation of rainwater systems

18.. (1)The performance of rainwater systems shall be tested and evaluated during the construction phase, at the end of construction and during operation.

(2) Testing and evaluation may include, but are not limited to –

(a) water tightness testing;

(b) visual inspection;

(c.) penetration testing;

(d). Any other area which the Authority has determined as necessary.

This section requires the testing and evaluation of rainwater systems at various phases, and provides a non exhaustive list of some of the testing to be considered.

Regulation 19 - Responsibility to monitor and control of quality of water

[**19**. (1) Notwithstanding Regulation 9 of these Regulations, the monitor and control of the quality of the harvested rainwater shall be the responsibility of the [National Water and Sewerage Authority].

(2). The National Water and Sewerage Authority shall, in collaboration with the Bureau of Standards and Ministry of Health—

(a). monitor water resource quality and

(b). conduct water quality testing of harvested rainwater

under these Regulations.

(3) The [NAWASA] [Ministry of Health] may, if required, certify and designate private entities to provide services related to the testing of the water quality of harvested rainwater,

(4) In addition to the requirements under this Regulation, an owner or occupier of a building shall obey and comply with all directives, instructions, regulations and standards set up by the Ministry responsible for Health for the quality of water, and any sanitary aspect of the waterworks shall be obeyed and complied with by the owner or occupier.

(5) Any duly authorised officer of the Ministry responsible for Health may, on identifying himself to an officer of the licensee, enter the premises of an owner or occupier or inspect any

waterworks for the purpose of inspecting or taking samples of water to verify compliance under this section.

(5) Any person who hinders or obstructs any duly authorised officer of the Ministry responsible for Health from entering the premises or waterworks of any owner or occupier of a building under this section is liable on summary conviction to a fine not exceeding [one hundred thousand dollar]s or to imprisonment for a term of one year, or to both.

(6) In carrying out any of its functions under this section, the Ministry of Health shall comply with all necessary and relevant international health and sanitation standards, including those standards set by the World Health Organisation.

This regulation is important, as it ensures the Authority doesn't usurp the role of the Water Management Unit/NAWASA or the Ministry of Health, in relation to water quality in general; as a result, on water quality issues, it is expected that the PDA will work with these bodies where warranted.

The section also states that the Ministry of Health shall also comply with international best standards, including those set by the WHO.

Regulation also provides for certification and designation for rain water quality testing, if required by the competent authority

Regulation 20 - Penalties for non-compliance

20 (1) Any person who contravenes the provisions of these Regulations where there is no previously prescribed penalty, or obstructs any authorised officer in performing their duties under these Regulations, shall be guilty of an offence, punishable with a fine of [a maximum of] five thousand dollars or imprisonment for a term of [a maximum of]six months, or to both, as the Court or Tribunal may determine.

(2) Notwithstanding subregulation(1), the Authority may elect to:-

(a) provide offenders with timelines to remedy breaches;

(b) institute administrative penalties, or

(c) enable technical assistance

for offenders as an initial mechanism for compliance.

(3) Any person who fails to comply with the directions of the Authority under this regulation is liable to the penalty prescribed in subsection (1).

This is the penal section, thus indicating specifically that any contravention of these Regulations will result in either a specific fine, term of imprisonment, or both. The Authority is able to work with persons however, and can use administrative penalties, action plans, or technical assistance to improve compliance with the Regulations, if this is the better option.

Regulation 21 - Offences committed by companies

21 (1) A body corporate which contravenes these Regulations shall be liable to a fine of not less than [one thousand dollars] nor more than [two hundred and fifty thousand dollars], based on the size of the business, its financial standing and any other relevant factors as the Court or Tribunal may determine.

(2). If a company commits an offence under these Regulations and it is proved that the offence occurred with the consent or connivance of or was attributable to any neglect on the part of, a director, manager, secretary or other similar officer of the body, or any person who was purporting to act in any such capacity, that person, as well as the company, commits the offence.

(3) For the purposes of subregulation (2), company also means sole traders, partnerships, trusts, charities, cooperatives, non-profit organisations or any other body which the Authority determines to be a company, whether incorporated or unincorporated.

(4) A company, its director, manager, secretary or officer of the company who contravenes the provisions of these Regulations or obstructs any authorized officer in performing their duties, shall be liable to a fine of no less than [one hundred thousand dollars] or no more than [two hundred and fifty thousand dollars] or to imprisonment for a term of six months or to both.

This section ensures that companies, sole traders or partnerships, essentially businesses in any form, can also be held liable for actions taken contrary to the Regulations. It also provides that is a defense if a person can prove that they had no knowledge of involvement; those who are held personally liable are also subject to penalties, thus ensuring the provision is effective in being dissuasive from the use of corporate vehicles to exploit areas.

Regulation 22 - Right to Appeal

22 (1) Persons who are aggrieved by any decision taken under these Regulations, may, within [ninety days] from receipt of notice of the decision, appeal in writing to the Tribunal, setting out the grounds of the appeal.

(2) The Tribunal shall operate as prescribed under section 28 of the Physical Planning and Development Control Act.

Regulation 23 - Rules and Guidelines

23 (1) The Authority may, with the approval of the Minister, make Rules or Guidelines prescribing forms, fees and other matters relating to the administration of these Regulations.

(2) Rules or Guidelines made under this section may prescribe that any contravention thereof shall constitute an offence punishable on summary conviction, to a fine of [five thousand dollars].

Regulation 24 – Maintenance

24. All persons shall follow the guidelines for maintenance within the Third Schedule with regard to the maintenance of rainwater harvesting systems.

Maintenance requirements for rainwater harvesting systems are provided in the Third Schedule.

Regulation 25 – Conflict with other legislation

25. (1) This Regulation shall have effect notwithstanding anything to the contrary in the [Water Resource Management and Regulation Act] [Public Health Act] [Public Health Regulations] [Water Quality Act].

(2) If any provision of this Regulation shall be declared unconstitutional or invalid, such declaration shall not invalidate any other parts thereof which shall remain in full force and effect.

This section ensures the avoidance of conflict with this Act/Regulations and other legislation.

FIRST SCHEDULE

Domestic rainwater minimum storage requirements

Domestic rainwater minimum storage requirements for MAINLAND GRENADA

Floor Area (m^2 /*sf*)	**< 23 m^2 (<250 sf)**	**23.1 - 74m^2 (251-800 sf)**	**74.1 - 112m^2 (801-1200 sf)**	**112.1 - 167m^2 (1201-1800sf)**	**167.1 – 223m^2 (1801-2400sf)**
Min. storage (Litres)	1,000 L	1,800 L	2,700 L	4,000 L	5,500 L
Min. storage (Imp. gallons)	200 gals	400 gals	600 gals	900 gals	1,200 gals
Min. storage (US. gallons)	250 gals	450 gals	700 gals	1,000 gals	1,400 gals

Domestic rainwater minimum storage requirements for MAINLAND GRENADA - CONT'D

Floor Area (m^2 /*sf*)	**223.1 – 260m^2 (2401 -2800sf)**	**260 - 297m^2 (2801-3200 sf)**	**297.1 - 372m^2 (3201-4000 sf)**	**>372 m^2 (>4000sf)**
Min. storage (Litres)	9,500 L	11,000 L	14,000 L	1,800 L
Min. storage (Imp. gallons)	2,100 gals	2,400 gals	3000 gals	4,000 gals
Min. storage (US. gallons)	2,500 gals	2,900 gals	3,600 gals	4,800 gals

Rainwater Storage Requirements for **Carriacou & Petit Martinique**

For Carriacou and Petit Martinique the domestic rainwater storage is based on the footprint square area of the building, with the minimum storage capacity shown below. For calculating average storage in Carriacou and Petit Martinique, a factor of 250 litres per square metre (5 gallons per square foot) can be applied.

Domestic rainwater storage size requirements for CARRIACOU & PETIT MARTINIQUE

Floor Area (m^2 /*sf*)	**< 23 m^2 (<250 sf)**	**23.1 - 74m^2 (251-800 sf)**	**74.1 - 112m^2 (801-1200 sf)**	**112.1 - 167m^2 (1201-1800sf)**	**167.1 – 223m^2 (1801-2400sf)**
Min. storage (Litres)	4,500 L	18,000 L	27,000 L	40,000 L	55,000 L
Min. storage (Imp. gallons)	1,000 gals	4,000 gals	6,000 gals	9,000 gals	12,000 gals
Min. storage (US. gallons)	1,200 gals	4,800 gals	7,200 gals	11,000 gals	14,000 gals

Domestic rainwater storage size requirements for CARRIACOU & PETIT MARTINIQUE - CONT'D

Floor Area (m^2 /*sf*)	**223.1 – 260m^2 (2401 -2800sf)**	**260 - 297m^2 (2801-3200 sf)**	**297.1 - 372m^2 (3201-4000 sf)**	**>372 m^2 (>4000sf)**
Min. storage (Litres)	64,000 L	73,000 L	91,000 L	114,000 L
Min. storage (Imp. gallons)	14,000 gals	16,000 gals	20,000 gals	25,000 gals
Min. storage (US. gallons)	17,000 gals	19,000 gals	24,000 gals	4,800 gals

SECOND SCHEDULE

Industrial, Commercial and Institutional requirements

The minimum storage requirement for buildings that function as accommodation facilities is based on the number of rooms, to be determined by the following formula:

$$Storage\ required = number\ of\ rooms\ (\Sigma_{rooms}) \times Storage\ factor\ (SF)$$

Criteria to determine the minimum storage requirement below –

- ICI rainwater storage size requirements – MAINLAND GRENADA

Facility Type	**Criteria**		**Storage factor (SF).**	**Minimum storage requirement**
	Metric	**Imperial**		
Commercial: small	≤93m^2 & or ≤10 users per day	≤1,000sf & or ≤10 users/day	50 L/m^2 (1 gal/sf)	2,300 L (500 gals)
Commercial: medium & large	>93m^2 but ≤465 m^2 & or >10 but ≤50 users per day	>1,000sf but ≤5,000sf and or >10 but ≤50 users per day	100 L/m^2 (2 gal/sf)	9,100 L (2,000 gals)
Commercial: large	>465m^2 & or >50 users per day	>5,000sf & or >50 users per day	100 L/m^2 (2 gal/sf)	45,550 L (10,000 gals)
Industrial: small scale	≤280m^2	≤3,000sf	100 L/m^2 (2 gal/sf)	18,000 L (4,000 gals)
Industrial: medium & large scale	>280m^2	>3,000sf	150 L/m^2 (3 gal/sf)	22,730 L (10,000 gals)
Hotels, Guest Houses, inns and the like			2,275 L (500 gals) per room	4,550 L (1,000 gals)
Institutional: Schools, churches, community centres			100 L/m^2 (2 gal/sf)	9,100 L (2,000 gals)

ICI rainwater storage size requirements – CARRIACOU & PETIT MARTINIQUE

Facility Type	**Criteria**		**Storage factor (SF).**	**Minimum storage requirement**
	Metric	**Imperial**		
Commercial: small	≤93m^2 & or ≤10 users per day	≤1,000sf & or ≤10 users/day	200 L/m^2 (4 gal/sf)	2,300 L (2,000 gals)
Commercial: medium & large	>93m^2 but ≤465 m^2 and or >10 but ≤50 users per day	>1,000sf but ≤5,000sf & or >10 but ≤50 users per day	250 L/m^2 (5 gal/sf)	45,500 L (10,000 gals)
Commercial: large	>465m^2 and or >50 users per day	>5,000sf & or >50 users per day	250 L/m^2 (5 gal/sf)	114,000 L (25,000 gals)
Industrial: small scale	≤280m^2	≤3,000sf	250 L/m^2 (5 gal/sf)	45,500 L (10,000 gals)
Industrial: medium & large scale	>280m^2	>3,000sf	300 L/m^2 (6 gal/sf)	91,000 L (20,000 gals)
Hotels, Guest Houses, inns and the like			9,100 L (2,000 gals) per room	91,000 L (20,000 gals)
Institutional: Schools, churches, community centres			300 L/m^2 (6 gal/sf)	91,000 L (20,000 gals)

THIRD SCHEDULE

Guidelines of Maintenance

1.1 Rainwater Quality Surveying

Rain water quality surveying shall be conducted by [the Ministry of Health] [NAWASA].

There are two main parts within a water quality survey, which are sampling and testing.

1.1.1 Sampling

Taking a sample from a RWH system, collecting and storing it in a way which does not influence the water quality of the sample. Samples should be collected and stored with care: the accuracy of the results is primarily determined by the accuracy of the collection of the sample. Hygienic handling and full understanding of water quality sampling are required. The time of sampling is very important, since concentrations can change over time within a RWH storage system or is depended on runoff events. For instance, runoff of agricultural pesticides will only occur during rainfall events and will decrease in time after storage in a surface runoff tank due to settlement of clay particles.

1.1.2 Testing

Testing can be done by field analysis or at laboratories. Field testing can be done directly in the field and doesn't require (long) transportation, which can alter the results. Field testing needs to be done by a trained person who is capable of performing the required tests under field conditions.

Regular testing for parameters such as pH, turbidity, and microbial content is essential to monitor and maintain water quality within permissible limits. Adhering to these stringent quality requirements ensures that rainwater harvested for drinking purposes meets or exceeds the standards set by regulatory authorities, safeguarding the health and well-being of consumers.

1.1.2.1 Testing Requirements

It is required that all owners or managers of rainwater harvesting systems to be used for commercial purposes, especially those to be used for drinking water, and/or personal hygiene, carry out inspection of its RWH system and testing of the water quality, every six (6) months. The water quality shall include, but not be limited to the parameters set out in **Error! Reference s ource not found.**.

1.1.2.2 Testing and Inspection Organisations

Testing and Inspection shall be carried out by organisations accredited to do so, like the Grenada Bureau of Standards (GDBS) or any other body or organisation so accredited by the PDA.

1.1.2.3 Certification

Upon satisfactory inspection and testing, certificates of compliance shall be issues to entities [by the Ministry of Health], in triplicates; one remains within the certifying organization, another is retained by the owner of the RWH facility, and a copy provided to the PDA on or before the 6 month anniversary of testing or new installation. Certifications maybe provided electronically.

1.1.2.4 Failure to Provide Certification

If a commercial entity fails to provide the PDA with the necessary certification, the PDA shall formally request the owner of the facility to provide the required certification within two weeks of the communication being made. Further failure to do so may result in the PDA filing an injunction to have the facility shut down, until the issue is resolved, and a certificate is provided.

1.1.2.5 Parameters and Criteria for Testing

World Health Organisation (WHO) (2004) has provided guidelines for drinking water quality based on numerous surveys. The quality criteria/parameters for potable water are listed in the Fourth Schedule.

General guidlines for the maintenance of rainwater harvesting systems

Parts	Maintenance	Frequency
Roof	Wash off roof with water when dust/dirt accumulated diverting run-off away from tank inlet	Monthly and especially after a long period of dry weather or heavy wind.
	Sweep off leaf litter	Regularly, especially after heavy winds and just before the rains set in, Check daily for leaf litter accumulation during rainy season
	Trim and cut trees around roof	
	Fix damage to roof (broken tiles, cracked water-proofing, etc.)	
	Paint if rust is present using lead-free paint	
Gutter and downpipes	Clean and wash out bird droppings, leaves, etc., with water	Check monthly and especially after a long period of dry weather or heavy wind. Check daily during rainy season
	Check and repair gutter and downpipes	When required
	Ensure guttering /downpipes are sloped to ensure steady flow and avoid pooling of water, collection of dirt, debris, etc.	During installation and after periods of heavy rain
	Repairs leaks at elbows	When required
Filters First-flush devices	Check and Clean	Before and after the rainy season and after every rooftop cleaning session
	Repair leaks	At the earliest
	Cut nearby tree roots (if underground tank)	At the earliest
Tank	Ensure lid is sturdy and secure	At all times
	Ensure there are no gaps where insects can enter or exit	At all times
	Securely fasten insect screen over the end of the overflow pipe/valve	At all times

Parts	Maintenance	Frequency
Roof	Wash off roof with water when dust/dirt accumulated diverting run-off away from tank inlet	Monthly and especially after a long period of dry weather or heavy wind.
	Sweep off leaf litter	Regularly, especially after heavy winds and just before the rains set in, Check daily for leaf litter accumulation during rainy season
	Trim and cut trees around roof	
	Fix damage to roof (broken tiles, cracked water-proofing, etc.)	
	Paint if rust is present using lead-free paint	
Gutter and downpipes	Clean and wash out bird droppings, leaves, etc., with water	Check monthly and especially after a long period of dry weather or heavy wind. Check daily during rainy season
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	Cut nearby tree roots (if underground tank)	At the earliest
Tank	Ensure lid is sturdy and secure	At all times
	Ensure there are no gaps where insects can enter or exit	At all times
	Securely fasten insect screen over the end of the overflow pipe/valve	At all times

FOURTH SCHEDULE

Rainwater quality criteria based on WHO

	Roof water Harvesting	Surface runoff
E-Coli	<10cfu/100 ml	<10cfu/100 ml
Ammonia	<1.5 mg/l	<1.5 mg/l
Chlorine	>0.2 – 0.5 and < 5 mg/l	>0.2 – 0.5 and < 5 mg/l
Aluminium	Not relevant	>0.2 5 mg/l
pH	6.5 – 8.5	6.5 – 8.5
Turbidity	Not relevant	<15 NTU
Nitrate/Nitrite	Not relevant	