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THE WATER ACT

(Cap. 372)

THE WATER (HARVESTING AND STORAGE) REGULATIONS,  
2025

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## THE WATER ACT

(Cap. 372)

IN EXERCISE of the powers conferred by section 142 of the Water Act, the Cabinet Secretary for Water, Sanitation and Irrigation makes the following Regulations—

THE WATER (HARVESTING AND STORAGE) REGULATIONS,  
2025

## PART I - PRELIMINARY

- 1 These Regulations may be cited as the Water (Harvesting and Storage) Regulations, 2025. Citation.
- 2 In these Regulations, unless the context otherwise requires— Interpretation.
- “Act” means the Water Act; Cap. 372.
- “Authority” means the Water Resources Authority established under section 11 of the Act;
- “base flood” means the flood having a one percent chance of being equalled or exceeded in any given year;
- “dam” includes any existing or proposed structure together with appurtenant works, which is capable of containing, storing or impounding water including temporary impoundment or storage above ground level, whether that water contains any substance or not;
- “flood control works” means structures and measures used to manage flood water movement and minimize damage caused by floods and they include—
- (a) levees, dykes, floodwalls and flood gates to redirect flood run-off;
  - (b) river training through construction of diversion channels of the river course; and
  - (c) dams and reservoirs to store and release water gradually during major flood events,
- “levee” means a man-made structure, usually an earthen embankment or gabion, designed and constructed in accordance with sound engineering practices to contain, control or divert the flow of water so as to provide protection from flooding and includes dykes;
- “maintenance plan” means information, policies and procedures for the optimal maintenance of water works or group of water works;
- “net freeboard” means the vertical distance between the maximum water surface and the crest of the dam;
- “pan” includes any existing or proposed structure together with appurtenant works, which is capable of containing, storing or impounding water including temporary impoundment or storage, whether that water contains any substance or not;

“regulated watercourse” means a watercourse on which the flow has been modified from its natural state by water storage or flood mitigation structures which provide a means of controlling or otherwise regulating the release of water into the natural channel;

“reservoir” means the body of water impounded by a dam;

“spillway” means a structure used to provide the controlled release of flows from a dam or levee into a downstream area typically the riverbed of the dammed river itself;

“storage capacity” means the total volume of free water excluding groundwater that could be stored below the lowest unobstructed spillway crest level or free outlet level of a dam, or below the maximum operating level in the case of any residue deposit including tailings dams;

“storm water” means run-off water that has been concentrated by means of a drain, surface channel, subsoil drain or formed surface;

“watercourse” has the meaning assigned to it in section 2 of the Act;

“water harvesting system” means a system comprising entrapment, transportation, filtration and storage of rainwater for reuse or recharge;

“water storage” has the meaning assigned to it in section 2 of the Act;

“Water Storage Authority” means the National Water Harvesting and Storage Authority established under section 30 of the Act;

“works” has the meaning assigned to it in section 2 the Act; and

“waterworks development agency” has the meaning assigned to it in section 2 of the Act.

3 The purpose of these Regulations shall be to provide a framework for— Purpose.

- (a) the development, management and classification of dams and other water works; and
- (b) climate change, flood mitigation and water harvesting.

4 These Regulations shall apply to— Application.

- (a) public and private waterworks for water harvesting and storage;
- (b) reservoirs for impounding surface run-off and for regulating stream flows to synchronize such waterworks with water demand patterns; and
- (c) structures and devices for flood control and management.

## PART II- CLASSIFICATION OF DAMS

- 5 (1) The owner or operator of a dam shall—
- Classification of dams.
- (a) notify the Authority of the provisional classification into which the dam falls in accordance with the criteria set out in the First Schedule; and
- (b) take account the risk factors set out in the Second Schedule in the notification.
- (2) The Authority may, for purposes of determining an application for a permit for the development of a dam or otherwise in exercise of its regulatory mandate, affirm or vary whether the dam falls into the class specified by the owner under sub-regulation (1).
- (3) In classifying a dam, the principle to be applied is that the criteria or risk factor that results in the higher class of the dam shall prevail.
- 6 (1) The minimum net freeboard for class SD1 dams shall not be less than zero point six metres.
- Minimum net freeboard.
- (2) The minimum net freeboard for class SD2 and SD3 dams shall be one metre.
- 7 (1) The minimum acceptable return period for the design of a dam spillway shall be as specified in Table 4 in the Second Schedule.
- Minimum spillway design flood.
- (2) The Authority may for purposes of determining the risk factor, require the owner of a dam to provide a higher return period to mitigate the risks associated with each site.
- 8 (1) National public waterworks shall be developed and managed by or under a contract with the Water Storage Authority, if the national public waterworks—
- National public waterworks.
- (a) comprises a dam, a reservoir or other artificial structure constructed to control the flow of the waters of a watercourse and designed or operated primarily to regulate stream flows to synchronise them with water demand patterns implemented pursuant to section 8(2)(d) of the Act;
- (b) purpose is water storage for bulk distribution of water for multipurpose use;
- (c) is of strategic national importance; and
- (d) is financed using monies of the national government pursuant to section 8 (1)(b) of the Act.
- (2) National public waterworks whose primary purpose is for bulk distribution and provision of water services implemented pursuant to section 8(2)(b) of the Act may be developed and operated by or under a contract with a waterworks development agency or through the mechanisms specified under section 69 of the Act.

(3) National public waterworks developed and managed by the Water Storage Authority for the storage of flood flows to enable downstream releases for the purposes of flow regulation may in addition to the impoundment and flow regulation structures associated with the storage and release of water from the reservoir comprise structures and facilities to enable multi-purpose use such as draw-off towers that facilitate direct abstraction from the reservoir.

(4) A person abstracting water from a national public water works developed and managed by the Water Storage Authority shall pay the specified fees in accordance with the approved tariff pursuant to section 72 (1)(ba) of the Act.

(5) The treatment or bulk transfer of water facilities shall be developed or managed by or under a contract with a waterworks development agency in accordance with section 69 of the Act.

(6) A county government may, in collaboration with the Authority, develop, operate and maintain a dam for water harvesting and storage for use in bulk water provision, irrigation or other approved activities.

9 (1) A private person may, under an agreement with the Water Storage Authority, in consultation with the County Governments and subject to compliance with the applicable law on public private partnerships develop, operate and maintain a dam to regulate stream flows by releasing the water stored into a natural watercourse as a public private partnership venture.

Public private partnership venture.

(2) Where a water resource storage dam has been constructed to enable multi-purpose use, a user may, under a contract with the Water Storage Authority, acquire rights of access to the water resources storage dam for purposes of abstraction of water directly from the dam or reservoir.

### PART III- DEVELOPMENT OF DAMS

10 The Water Storage Authority shall, in implementing the water resources plan, ensure the uninterrupted flow of the natural water course and the beneficial use of the water resource to the public and in compliance with the Act.

Prior right to water for storage.

11 (1) A person shall, prior to commencing development of dams, apply for and obtain—

Requirements for construction of dams.

- (a) a water use permit issued by the Authority under the Act;
- (b) an environmental impact assessment licence in accordance with the Environmental Management and Coordination Act; and
- (c) authorization from the mandated lead agency where the proposed water works is to be located inside a protected area or catchment area.

Cap. 387.

(2) The provisions of sub regulation (1) shall not apply—

- (a) to works constructed in emergency circumstances;
- (b) to temporary works in operation for a period of less than two years; and
- (c) if the works are a structure less than two metres water depth or ten thousand cubic meters total storage unless the Authority directs otherwise.

(3) Within two years after the completion of the works under sub-regulation (2)(a), the owner, developer or operator of the waterworks may—

- (a) demolish the works and restore the site; or
- (b) retain the works for purposes of water resources storage or flood control subject to compliance with sub-regulation (1).

12 (1) A person who wishes to develop a dam of class SD 2 or SD 3 specified in Table 1 of the Second Schedule shall, before commencing the construction of the waterworks, undertake a feasibility study.

Feasibility Study.

(2) The feasibility study referred to under sub-regulation (1) shall—

- (a) be planned and supervised by a qualified water sector professional falling into the appropriate category for that class of dam and selected on the basis of the categories in Table 3 of the Third Schedule;
- (b) identify and address the risk factors associated with the particular waterworks contemplated and the class of dam; and
- (c) identify and address the main factors likely to affect the safe performance of the structures to be constructed.

(3) An applicant shall submit the feasibility study report to the Authority for review.

(4) The Authority may, within thirty days—

- (a) provide an approval for the proposal to proceed to full design; or
- (b) where the Authority is not satisfied with the feasibility study report, require the applicant to enhance the feasibility study report before making a final decision.

(5) The Authority may, before determining an application for a permit for a storage dam not required under sub-regulation (1) to undertake a feasibility study, require the applicant to undertake and submit a feasibility study.

(6) The applicant shall undertake public participation in the area of construction of the dam.

13 (1) Dams shall be designed and supervised by the appropriate category of qualified water sector professionals as provided in the regulations relating to water resources.

Design by water sector professional.

(2) Dams shall be constructed by the appropriate category of contractors as set out in Table 3 in the Second Schedule.

(3) A contractor undertaking construction of dams under these Regulations shall be registered in accordance with the section 15 of the National Construction Authority Act.

Cap. 118.

(4) A person who contravenes the provisions of this regulation commits an offence and is liable on conviction to the penalty set out in section 147 of the Act.

14 (1) An application to the Authority for an authorisation to construct a dam shall be accompanied by a dam design report in the Form set out in the Third Schedule.

Dam design report.

(2) A qualified water sector professional shall prepare the dam design report which shall into account the class of dam to be constructed and the risk category.

15 A person authorized to construct a dam shall submit a dam construction progress report as may be required the Water Storage Authority.

Dam construction progress report.

16 (1) On completion of construction, the applicant shall submit to the Authority a dam completion certificate, a dam completion report and a dam operation report addressing the issues set out in the Third Schedule.

Dam completion report and dam operation report.

(2) The issuance of the water use permit is conditional upon approval of the dam completion report and dam operation report by the Authority.

17 An owner or operator of a dam shall prepare and submit to the Authority for approval a cessation or resumption plan if—

Cessation or resumption plan.

- (a) the owner or operator intends to cease, suspend, restrict or limit the operation of the dam for more than three hundred and sixty-five days;
- (b) the owner or operator intends to resume the operation of a dam which has ceased or been suspended, restricted or limited for more than three hundred and sixty-five days; and
- (c) the dam falls within risk category SD2 or SD3.

#### PART IV- RELEASE OF WATER FROM DAMS

18 The water held in the storage dams of the Water Storage Authority shall—

Release and use of stored water.

- (a) not be diverted or abstracted for use for any purpose except with the prior written approval of the Water Storage Authority; and
- (b) be released into a natural watercourse subject to reductions in volume arising from evaporation and seepage according to a water release programme contained in its dam operation report and approved by the Authority to augment or regulate the stream flows of the natural watercourse.

19 (1) Water use permit holders shall, in addition to the water use charges payable under the Act, pay the Water Storage Authority a premium specified in the Fifth Schedule.

Premiums for use of water from storage facilities.

(2) A water use permit holder for abstraction from a regulated river shall, in addition, pay twenty percent of the premium payable under sub-regulation (1) to the Water Storage Authority.

(3) A delay or failure to pay the premium shall attract interest at the rate of two percent for each month of such delay or failure.

(4) The premium which is in arrears shall be recoverable by the Water Storage Authority or private owner or operator of the dam as a civil debt in a court of competent jurisdiction without prejudice to the power of the Authority to treat the failure of the permit holder to make payment as breach of the conditions of the permit and suspend or cancel the permit.

20 A permit holder storing or arresting the flow of water using a dam or weir located on a body of water or watercourse shall, unless otherwise directed by the Authority, provide, at a depth measured from the top of the dam or weir and to be specified by the Authority in each particular case, an outlet, controlled by a valve, sluice gate or other device, which shall be capable of being operated at all stages of the flow of such body of water or watercourse to ensure the normal flow, or other flow as required by the Authority, of such body of water or watercourse can be passed through or around such dam or weir at all stages:

Outlets for release of stored water.

Provided that where the normal flow of the body of water or watercourse is automatically by-passed around the reservoir, without any storage or arresting of the flow of the water being effected no such outlet works need be constructed.

21 (1) A permit holder may release the stored water into a natural watercourse, on the approval of the Authority and, subject to the water stored being appurtenant to the land upon which it is to be utilized, and the conditions of the authorization or permit authorizing the diversion or abstraction herein afterwards mentioned may, at a point downstream of the point of storage, divert or abstract from the body of water into which the stored water is released the quantity of water so released.

Authorisation for release of stored water.

(2) A permit holder shall, before releasing water into a natural watercourse, issue a notice to the Authority and the persons affected by the use of the body of water.

(3) The notice referred to under sub-regulation (2) shall contain

- (a) the timelines during which it will be released into the body of water; and
- (b) the rate of discharge of the stored water.

(4) No permit holder shall, except with the prior written approval of the Authority, divert or abstract any proportion of the flow

of the body of water due to the water released, nor impound or store, except to such an extent as may be imposed on the permit holder by the maximum capacity of their works for discharging the flow of the body of water through or around their works which abstract the flow of the water, any proportion of the flow of the body of water due to the water so released.

22 (1) The operator of a dam shall notify the Authority and persons downstream likely to be affected in the event of any discharge from the dam whether caused by dam failure or intended releases from the dam that might result in damage downstream.

Notice  
downstream.

(2) The operator of a dam shall take adequate measures at their cost, as contained in the approved dam operation report to protect persons, infrastructure and environments downstream likely to be affected in the event of any discharge from the dam whether caused by dam failure or intended releases from the dam that might result in damage downstream.

(3) In the event of such a discharge or intended release, a person who fails to comply with the approved dam operation report commits an offence and shall, on conviction, be liable to the penalties specified under section 147 of the Act.

#### PART V- MAINTENANCE AND MANAGEMENT OF DAMS

23 (1) An owner or operator of dams shall undertake the maintenance and management of the dams in accordance with the requirements of the maintenance and operation systems specified in the Third Schedule.

Maintenance and  
management of  
dams.

(2) Where the Water Storage Authority identifies a dam without a known owner or operator, the Water Storage Authority shall assume ownership of the dam and discharge the responsibilities of the owner or operator of the dam.

(3) Before the Water Storage Authority can assume ownership and the responsibilities under sub regulation (2), it shall publish a thirty days' notice in the Gazette of the intention to assume ownership and responsibility for the management and maintenance of the dam and upon expiry of the notice period, if no person claims ownership or responsibility, the notice shall take effect.

24 An owner or operator shall implement the approved maintenance and management plans which shall comprise—

Maintenance and  
management  
plans.

- (a) a maintenance operational plan;
- (b) a maintenance budget;
- (c) maintenance systems; and
- (d) maintenance performance norms and standards.

25 (1) An owner or operator of water works shall implement a maintenance operation plan for the works appropriate to the class and risk category of the storage dam.

Maintenance  
operational plan.

(2) An owner or operator of waterworks shall conduct a maintenance analysis for the works' infrastructure including—

- (a) identification of all the works;
- (b) identification of critical works; and
- (c) analysis of the maintenance options and determination of the preferred option.

26 An owner or operator shall document maintenance outcomes which shall include—

Maintenance outcomes.

- (a) compliance with these Regulations;
- (b) reliability of the infrastructure; and
- (c) cost of maintenance.

27 (1) An owner or operator of waterworks shall identify maintenance requirements by considering—

Maintenance requirements analysis.

- (a) the environmental impact;
- (b) public health and safety impact;
- (c) financial impact; and
- (d) service delivery impact.

(2) The impact of each criteria shall be rated using a five-point scale.

(3) The individual ratings shall be combined into a combined rating which shall be used to identify the maintenance requirements of specific waterworks.

28 (1) The costs related to the maintenance activities for each dam operated and maintained by or under a contract with the Water Storage Authority shall be calculated by reference to costs approved by the Authority.

Infrastructure maintenance budget.

(2) Where available maintenance budgets are inadequate, the importance of each activity shall be considered to prioritize the maintenance actions to be undertaken.

29 (1) An owner or operator of a dam shall maintain a register of the water works which shall indicate all assets that comprise the dams.

Waterworks infrastructure maintenance system.

(2) The maintenance activities for a storage dam shall be regulated by a waterworks infrastructure maintenance system which shall—

- (a) record maintenance costs, time and other resources consumed against the works;
- (b) include links to the financial management system to facilitate reconciliation of maintenance budgets;
- (c) include built-in maintenance analysis tools or ability to export information to other applications to facilitate maintenance analyses;

- (d) analyse infrastructure performance to be used as an input to maintenance planning; and
- (e) include clear disaster management plans for ensuring safety in the event of an emergency.

(3) The Water Storage Authority shall submit the initial waterworks infrastructure maintenance system to the Authority for approval within twelve months of the commencement of these Regulations and the Authority shall make a determination within thirty days of the submission.

(4) In every subsequent year following the period provided for under sub-regulation (3), the Water Storage Authority shall submit the waterworks infrastructure maintenance system to the Authority and shall indicate any modifications made to the previous plan.

#### PART VI—FLOOD CONTROL WORKS

30 (1) A person shall, prior to commencing flood control works, apply for and obtain—

- (a) written approval issued by the Water Storage Authority;
- (b) an environmental impact assessment licence in accordance with the Environmental Management and Coordination Act; and
- (c) authorization from the mandated lead agency where the proposed flood control works is to be located inside a protected area or catchment area

(2) The provisions of sub regulation (1) shall not apply—

- (a) to works constructed in emergency circumstances;
- (b) to temporary works in operation for a period of less than six months; and
- (c) if the works are a structure less than 0.5 metres above the ground level.

(3) Within one year after the completion of the works under sub-regulation (2)(a), the owner, developer or operator of the flood control works shall retain the works for purposes of flood control subject to compliance with sub-regulation (1).

31 (1) A person shall, before commencing construction of a flood control works undertake a feasibility study.

(2) The feasibility study under sub-regulation (1) shall—

- (a) be planned and supervised by a qualified water sector professional; and
- (b) identify and address the main factors likely to affect the safe performance of the structures to be constructed.

(3) An applicant shall submit the feasibility study to the Water Storage Authority for review.

Requirements for construction of flood control works.

Feasibility study for flood control works.

(4) The Water Storage Authority may, within thirty days—

- (a) provide an approval for the proposal to proceed to full design; or
- (b) where the Water Storage Authority is not satisfied with the feasibility study, require the applicant to enhance the feasibility study before making a final decision.

(5) The applicant shall undertake public participation in the area of construction of the flood control works.

32 (1) No flood control works shall be designed and supervised unless the design and supervision is done by the appropriate category of qualified water sector professionals as provided in the regulations relating to water resources.

Design by water professionals.

(2) No flood control works shall be constructed unless the construction of flood control works is undertaken by the appropriate category of contractor as categorised by the relevant Ministry and National Construction Authority Act.

(3) A contractor undertaking construction of flood control works under these Regulations shall be registered in accordance with the section 15 of the National Construction Authority Act.

(4) A person who contravenes the provisions of this regulation commits an offence and is liable on conviction to the penalty set out in section 147 of the Act.

33 (1) An application to the Water Storage Authority for an authorisation to construct a flood control works shall be accompanied by a flood control works design report in the Form set out in the Third Schedule.

Flood control works design report.

(2) A qualified water sector professional shall prepare the flood control works design report which shall take into account the type of flood control structure to be constructed.

34 A flood control works permit holder shall submit construction progress report as may be required by the Water Storage Authority.

Flood control works construction progress report.

35 On completion of construction, an applicant shall submit to the Water Storage Authority a flood control works completion certificate, a completion report and operation report addressing the issues set out in the Fourth Schedule.

Flood control works completion report and operation report.

36 (1) An owner or operator of flood control works shall—

- (a) maintain the facilities for flood control in such a manner, and operate the facilities at such times and for such periods as may be necessary to obtain the maximum benefit; and
- (b) ensure that a reserve supply of materials required during a flood emergency is available at all times at the works.

General maintenance of flood control works.

(2) An owner or operator of flood control works shall —

- (a) not undertake any modifications over, under, or through the walls, levees, improved channels or flood ways; and
- (b) not undertake any excavation or construction within the limits of the structure right-of-way,

without making a determination that such improvement excavation, construction, or alteration shall not adversely affect the functioning of the flood control facilities.

(3) The request for determination for approval under sub-regulation (2) shall be in writing to Water Storage Authority and shall comprise of—

- (a) the designs of the existing works and the intended modifications thereto; and
- (b) built drawings of the completed modified works.

(4) The Water Storage Authority shall issue a determination on the request to the owner or operator of flood control works within thirty days.

(5) The improvements or alterations that may be undertaken pursuant to sub-regulation (2) shall be constructed in accordance with standard engineering practice.

37 (1) Dykes and levees shall be maintained to ensure durability of the structures during floods and in particular measures shall be taken to—

Maintenance of dykes and levees.

- (a) promote the growth of sod;
- (b) exterminate burrowing animals;
- (c) provide for routine mowing of the grass and weeds, removal of wild growth and drift deposits, and repair of damage caused by erosion or other forces;
- (d) where practicable, to retard bank erosion by planting suitable growth on areas riverward of the dykes or levees;
- (e) filling of burrowed holes and eroded sections;
- (f) maintenance of cut-off drains; and
- (g) maintenance of the constructed cattle ramps across the dykes or levees.

(2) An owner or operator of a dyke or levee shall undertake inspections of dykes or levees to ensure—

- (a) no settlement, sloughing, or material loss of grade or dyke and or levee cross section takes place;
- (b) no caving occurs on either the land side or the river side of the dyke or levee which might affect the stability of the dyke or levee section;
- (c) no seepage, saturated areas, or sand boils occur;

- (d) toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not clogged;
- (e) drains through the dykes or levees and gates on drains are in good working condition;
- (f) no revetment work or riprap has been displaced, washed out, or removed;
- (g) no action is being taken, such as burning grass and weeds during inappropriate seasons, which will retard or destroy the growth of sod;
- (h) the availability of adequate labour and materials to meet any contingencies; and
- (i) ensure uprooting of deep-rooted vegetation.

(3) The dykes or levees shall, during floods, be inspected to locate possible sand boils or unusual wetness of the landward slope and to ensure that no—

- (a) slides or sloughs develop;
- (b) wave wash or scouring action occurs;
- (c) low reaches of levees exist which may be overtopped; and
- (d) other conditions exist which might endanger the structure.

38 (1) Inspections shall be undertaken to ensure—

Maintenance of  
flood walls.

- (a) no seepage occurs;
- (b) no excessive settlement occurs which affects the stability of the wall or its water tightness;
- (c) no trees exist, the roots of which might extend under the wall and offer accelerated seepage paths;
- (d) the concrete has not cracked, chipped, or broken which might affect the stability of the wall or its water tightness;
- (e) the prevention of accumulation of trash and debris adjacent to walls, and to ensure that no fires are lit near them;
- (f) no bank caving conditions exist riverward of the wall which might affect its stability; and
- (g) toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged.

(2) Inspections shall be conducted—

- (a) prior to the commencement of the flood season;
- (b) immediately following each major high-water period;
- (c) at intervals not exceeding ninety days; and
- (d) to deter encroachments and effect repairs.

- |   |  |
|---|--|
| <p>39 (1) Inspections shall be undertaken to ensure—</p> <ul style="list-style-type: none"> <li>(a) no leakage occurs;</li> <li>(b) no excessive settlement occurs which affects the stability of the gate or its water tightness;</li> <li>(c) no trees exist, the roots of which might extend under the gate and offer accelerated leakage paths;</li> <li>(d) the gate has not corroded, cracked, chipped, or broken which might affect the stability of the gate or its water tightness;</li> <li>(e) the prevention of accumulation of trash and debris adjacent to gates, and to ensure that no fires are lit near them;</li> <li>(f) no bank caving conditions exist riverward of the gate which might affect its stability; and</li> <li>(g) toe drainage systems and pressure relief wells are in good working condition, and that such facilities are not becoming clogged.</li> </ul> <p>(2) Inspections shall be conducted—</p> <ul style="list-style-type: none"> <li>(a) prior to the commencement of the flood season;</li> <li>(b) immediately following each major high-water period;</li> <li>(c) at intervals not exceeding ninety days; and</li> <li>(d) to deter encroachments and effect repairs</li> </ul>   | <p>Maintenance of flood control gates.</p>                                     |
| <p>40 (1) The owner and or operator of a flood control works shall submit to the Water Storage Authority for approval, emergency preparedness plans for flood control works and these plans shall—</p> <ul style="list-style-type: none"> <li>(a) indicate actions that the owner and or operator shall take to address safety problems at a flood control works;</li> <li>(b) contain appropriate procedures and information to assist the owner or operator in issuing early warning notification messages to responsible disaster management authorities in the national and county governments, representative bodies or of any communities likely to be affected by the condition of the flood control works and with whom arrangements have been made in connection with the issue of warnings; and</li> <li>(c) contain engineering drawings of the flood control works and inundation maps to show disaster management authorities critical areas for action in case of an emergency.</li> </ul> <p>(2) The owner or operator of a flood control works shall, in consultation with the county government, local communities and the relevant disaster management authorities, share information and engage in joint efforts to implement strategies to mitigate against the effect of floods.</p> | <p>Emergency management plans for floods control works affected by floods.</p> |

(3) Prioritization of planning for flood control works emergencies shall be determined based on relevant information including—

- (a) the condition of the flood control structure and the degree, if any, of safety deficiency;
- (b) population at risk and community vulnerability;
- (c) scale of flood risk costs;
- (d) range of other consequences such as those on property, the environment or community value of the damage; and
- (e) stakeholder perceptions and expectations.

(4) The owner or operator of a flood control works shall engage with the county government, civil society, and other stakeholders in coordination with disaster management authorities to develop community awareness strategies.

41 (1) An owner or operator of a flood control works shall update emergency contact information contained in its emergency management plan at least once every twelve months.

Emergency contact information.

(2) In the event of a change on the emergency contact information in an emergency management plan, an owner or operator of a flood control works shall, within fourteen days from the date of the change submit the information in writing to the Water Storage Authority.

42 (1) An owner or operator of a flood control works shall inspect the works every once a year and submit a report to the Water Storage Authority.

Inspection reports.

(2) Inspection reports shall be submitted to the Water Storage Authority within thirty days of the completion of the flood control works inspection.

(3) A person who contravenes the provisions of this regulation commits an offence and is liable on conviction to the penalty set out in section 147 of the Act.

#### PART VII – STRATEGIC WATER EMERGENCY INTERVENTIONS

43 (1) The Water Storage Authority shall maintain a Drought Response Plan to be implemented in collaboration with the National Drought Management Authority.

Drought response plan.

(2) Drought preparedness measures may include, where appropriate, designing and constructing storage dams with features and facilities enabling diversion of water from the storage dam into natural watercourses in emergency drought situations.

(3) The Authority shall, in consultation with the Cabinet Secretary, approve a drought response plan with or without conditions.

44 The Water Storage Authority shall implement measures to enable it respond by activating its Drought Response Plan including making releases of water into watercourses designed to ameliorate the effects of drought, permitting diversion of water from a storage dam into other natural watercourses and direct abstraction by water service providers of water from the Water Storage Authority's storage dams where practicable.

Water supply and demand management.

45 The Water Storage Authority may implement measures to improve systems for the management of stored water to conserve water within its water resources storage facilities during drought.

Improved system efficiency.

#### PART VIII – CLIMATE CHANGE MITIGATION

46 (1) The Water Storage Authority shall monitor, collect, collate and maintain data of floods experienced in flood prone areas and droughts experienced in drought prone areas in collaboration with the National Drought Management Authority including—

National water resources storage and flood control data.

- (a) information on the state of the works infrastructure;
- (b) climate reports;
- (c) base flood and drought data;
- (d) data on flood and drought prone areas;
- (e) information of flood inundation levels and drought extent areas;
- (f) flood and drought hazard maps;
- (g) flood and drought early warning systems; and
- (h) socio-economic impacts.

(2) The data shall be publicized on the Water Storage Authority's website provided that a person requiring an extract of the data certified to be true from the Water Storage Authority's database shall make an application for it in writing and pay such reasonable costs as the Water Storage Authority may require.

(3) Data provided by the Water Storage Authority shall not be transferable to a third party and the Water Storage Authority shall not be liable for any error or omissions in the data.

47 The Water Storage Authority shall implement the action plan and strategies formulated by the Cabinet Secretary to guide how climate change considerations shall be integrated in the management of water resources, including mitigation and adaptation actions, and the prevention and management of floods and other impacts of climate change.

Climate change action plan.

48 The Authority shall regulate the implementation of integrated flood management plans in all the flood prone areas, by relevant state organs in collaboration with stakeholder groups.

Flood mitigation.

49 The integrated flood management plans shall be implemented through water resource users associations and other

County governments and integrated flood

stakeholders in collaboration with county governments through guidelines issued by the Cabinet Secretary.

management plans.

50 The Authority may require the development of check dams, green energy projects and dykes for purposes of flood mitigation.

Check dams, green energy, projects, dykes.

#### PART IX- WATER HARVESTING

51 (1) Any building constructed after the commencement of these Regulations which is to be utilised—

Roof-based rainwater harvesting.

- (a) as an institutional facility, place of employment or otherwise;
- (b) as a manufacturing or industrial establishment; or
- (c) as a commercial establishment or place for the service of customers,

shall have its roof adequately guttered for catching rain water or may have a ground catchment for the purposes of catching rainwater pursuant to these Regulations.

(2) Subject to sub-regulation (3), the storage capacity of the tank or tanks or other storage facility provided in respect of any building referred to in sub-regulation (1), shall be capable of storing water sufficient to meet the equivalent of seven days' average water demand of the building.

(3) Where it is not practicable—

- (a) to gutter the roof of a building referred in sub-regulation (1) for catching rain water;
- (b) to provide a ground catchment having the prescribed area; or
- (c) to provide a tank or tanks having the prescribed capacity,

the building may, in the opinion of the county government or water services provider, be supplied with drinking water from a piped supply.

(4) A county government may, subject to such conditions and restrictions as it may deem proper to impose, permit the owner or occupier of the building to dispense in part or in whole with compliance to sub-regulation (1) or (2).

(5) Roof based rainwater may be harvested for use through a filter into a storage tank or, in compliance with the water resource quality standards specified by the Authority, for recharge of an open well or borehole and in case of a borehole in the building, rainwater shall be harvested through artificial structures or pits, irrespective of the nature of subsoil conditions.

(6) Rainwater from the roof of the buildings with tiled or sloped roof and flat roofs may be harvested using sized gutters or pipe lines stored either in a collection tank or storage structure of appropriate size placed over the ground or underground after proper filtering and disinfection.

(7) A filter shall be used to filter rain water to be used for non-potable purposes and shall be treated before use according to the drinking water guidelines specified by the Water Services Regulatory Board.

(8) Any surplus water available after filling a storage tank may be diverted to an open well through recharge structure or pits.

52 (1) A person may—

- (a) directly capture and store precipitation on a parcel of land owned or leased by the person in accordance with sub-regulation (2); or
- (b) place the water captured and stored pursuant to paragraph (a) to beneficial use on the parcel on which the water is captured and stored.

Land based  
rainwater  
harvesting

(2) Land based rain water harvesting shall be done using the appropriate ground water recharge structures or pits depending on the nature of the sub-soil conditions.

53 The Water Storage Authority shall implement and maintain a website which shall provide technical and capacity building support to enable compliance with these Regulations.

Technical and  
capacity building  
support.

54 (1) Every agricultural establishment using water resources for irrigation purposes shall implement water harvesting and storage measures capable of storing flood water sufficient to meet three months' water demand.

Rainwater  
harvesting by  
agricultural  
establishments.

(2) An agricultural establishment using water resources for commercial irrigation shall submit to the Water Resources Authority, a plan of water harvesting and applicable storage strategies.

(3) The Water Resources Authority or its agent may conduct an inspection to ensure compliance with the implementation report.

55 A County Government shall put in place measures to ensure that provision is made for planning, managing, maintaining, financing, extending and improving drainage services and storm water run-off collection within its area of jurisdiction.

Storm water run-  
off.

#### PART X- LICENSING OF QUALIFIED PROFESSIONALS AND QUALIFIED CONTRACTORS IN RESPECT TO WATERWORKS

56 (1) A water sector professional or dam contractor who wishes to be licensed as a water sector professional for storage dams or other waterworks or qualified dam contractor shall, if not already licensed under the relevant Water Resources Regulations for the appropriate class of storage dam, apply in writing to the Cabinet Secretary for licensing.

Licensing of  
water sector  
professional or  
dam contractor.

(2) The application under sub-regulation (1) shall be accompanied by—

- (a) a description of the class of waterworks and risk categories of the waterworks which the water sector professional or contractor wishes to be licensed in respect of; and

- (b) particulars of their relevant qualifications, training and experience.

(3) Before determining an application under sub-regulation (1), the Cabinet Secretary shall forward it to the Technical Advisory Committee established under the applicable Water Resources Regulations for consideration, except where the procedure provided for under sub-regulation (6) is followed.

(4) The Technical Advisory Committee may recommend for approval of the application under sub-regulation (1) by the Cabinet Secretary with conditions or it may recommend rejection of the application with reasons.

(5) The Cabinet Secretary shall consider the recommendations Technical Advisory Committee before granting an approval of an application under sub-regulation (1) or rejecting it.

(6) The Cabinet Secretary may approve an application by a qualified water sector professional for any task with a safety risk, by considering the recommendation by the Technical Advisory Committee, provided that—

- (a) the type of dam is similar to the dam type previously approved for the applicant; and
- (b) the maximum wall height of the dam as defined in these Regulations shall not exceed that for which the applicant has been previously licensed by more than—
  - (i) three metres in the case of Class SD1 dams;
  - (ii) five meters in the case of Class SD2 dams; and
  - (iii) fifteen meters in the case of Class SD3 dam.

(7) In the case of tasks to be carried out for a Class SD3 dam, a water sector professional shall apply to the Cabinet Secretary for approval of members of the team accompanied by the relevant information.

(8) The water sector professional or contractor shall be informed in writing of any decision of the Cabinet Secretary.

(9) A professional contemplated in sub-regulation (1) above shall—

- (a) inform the dam owner of the decision of the Cabinet Secretary;
- (b) apply to the Cabinet Secretary for approval of a person or group of persons to assist in the specified field of dam engineering if the approval is subject to conditions requiring assistance; and
- (c) immediately inform the Cabinet Secretary in writing if the professional has withdrawn from a task or their appointment has been terminated by the dam owner.

(10) An application under sub-regulation (9) (b) shall include the name, qualifications, curriculum vitae, and relevant experience of the person or group of persons providing assistance.

(11) The different class of qualified water sector professionals may be established specifying the maximum wall height of the dam, type of dam wall, regional maximum flood, and or type of task that the approved professional may undertake and conditions in accordance with Table 2 and Table 3 in the Second Schedule.

(12) The requirements for admission to a class of approved water sector professional on the register are similar with those for regulating the approval of a professional person as a qualified water sector professional for a specific task, with the additional requirement that a water sector professional shall have successfully completed at least one task for a specific dam as the qualified water sector professionals in accordance with these Regulations.

(13) The Cabinet Secretary shall maintain two separate registers of water sector professionals and dam contractors in accordance with the applicable regulations.

(14) The registers contemplated in sub-regulation (13) shall be published annually in the *Gazette* and shall be made available within reasonable time to any person who has made a written request to the Cabinet Secretary for a copy of the register.

(15) A qualified water sector professional on the register may undertake tasks as provided for on the register without having to reapply.

(16) A registered water sector professional may only perform a task or tasks within the class or class for which they have been approved and shall—

- (a) comply with the procedure outlined in regulation 10 (5) for tasks related to Class SD3 dams if applicable;
- (b) comply with the procedure outlined in regulation 10 (2) in the case of conditional approval; and
- (c) submit a copy of the licence issued by the Cabinet Secretary to the Water Resources Authority for its records and the dam owner confirming that they have been licenced to perform a specific task or tasks, within seven days of the licence being issued.

#### PART XI - GENERAL PROVISIONS

57 A person who contravenes the provisions of these Regulations commits an offence and shall, on conviction, be liable to the penalties provided under section 147 of the Act.

Offences.

58 (1) Any person with a complaint related to any matter falling within the mandate of the Water Storage Authority shall submit the complaint to the Water Storage Authority including the information set out in the Sixth Schedule.

Complaints mechanism.

(2) The Water Storage Authority shall consider and respond to the complaint within twenty-one days of receiving the complaint.

(3) A complainant who is dissatisfied with the decision of the Water Storage Authority, may appeal to the Tribunal.

59 (1) The Water Harvesting and Storage Regulations, 2024, are revoked.

Revocation and  
transitional  
arrangements.  
L.N. 140 of 2024.

(2) Notwithstanding the provisions of sub-regulation (1)—

- (a) construction of works by the Water Storage Authority or its agent prior to the commencement of these Regulations or construction work in progress on that date shall within a period of twelve months following the commencement of these Regulations or such longer period as the Authority may permit take measures to ensure the waterworks comply with these Regulations; and
- (b) where existing or ongoing waterworks are not authorised, the owner or operator shall within a period of twelve months following the commencement of the Regulations lodge an application with the Authority for a water use permit.

## FIRST SCHEDULE

*(r. 5(1)(a))*

## CLASSIFICATION OF DAMS

*Classification of Dams*

Class of Dam	Maximum Depth of Water at NWL (m)	Impoundment at NWL (m <sup>3</sup> )	Catchment Area (km <sup>2</sup> )
SD1	0 – 4.99	< 100,000	< 100
SD2	5.00 – 14.99	100,000 to 1,000,000	100 to 1,000
SD3	≥ 15.00	> 1,000,000	> 1,000

NWL = Normal Water Level

## SECOND SCHEDULE

(r. 5(1)(b), 7(1), 12(1), 13(2), 56(11))

## RISK FACTORS OF DAMS AND OTHER WATERWORKS

Table 1: Risk Factors

Classification	Population at Risk	Incremental Consequences of Failure		
		Loss of Life	Environmental and cultural values	Infrastructure, economics and other property
SD 1 (Low Risk)	Temporary / Permanent	Minimal numbers	Limited presence of: (a) important fisheries (b) important wildlife habitats (c) rare or endangered species, or (d) unique landscapes (e) sites of cultural significance and additionally  Restoration or compensation in kind for losses and damage is possible.	Low economic losses affecting limited infrastructure and residential buildings, public transportation or services or commercial facilities; alternatively limited destruction or damage to locations used occasionally and irregularly for temporary purposes.
SD 2 (Medium Risk)	Permanent	Significant numbers	Significant presence: (a) critical fisheries; (b) critical wildlife habitats; (c) rare or endangered species, or (d) unique landscapes (e) sites of cultural significance and additionally  Restoration or compensation in kind for losses and damage difficult.	Moderate economic losses affecting important infrastructure, public transportation or services or commercial facilities, or moderate destruction or severe damage to residential areas.
SD 3 (High Risk)	Permanent	Large numbers	Presence of: (a) critical fisheries; (b) critical wildlife habitats; (c) rare or endangered species, or (d) unique landscapes (e) sites of cultural significance and additionally  Restoration or compensation in kind for losses and damages is impossible or impracticable.	High economic losses affecting critical infrastructure, public transportation or services or commercial facilities, or significant destruction or damage to residential areas.

*Table 2: Design and Supervision of Dam*

Class of Dam	Category of Qualified Water Sector Professional
SD1	Panel II C, Panel I C1 & Panel I C2
SD2	Panel I C1 & Panel I C2
SD3	Panel I C2

*Table 3: Category of Dam Contractor*

Class of Dam	Category of Dam Contractor
SD1	C1, C2
SD2	C1, C2
SD3	C1

*Table 4: Minimum Return Period for Spillway Design*

Class of Dam	Minimum Return Period for Design of Spillway
SD1	1 in 50 years
SD2	1 in 100 years
SD3	1 in 500 years

*Table 5: Dam Safety Inspection Schedule*

Class of Dam	Frequency of inspection	Inspection by
SD1	Once in 3 years	Panel I C1, Panel I C2, Panel II C
SD2	Once in 2 years	Panel I C2, Panel I C1
SD3	Once a year	Panel I C2

## THIRD SCHEDULE

(r. 12 (2)(a), 14(1), 16(1), 23(1), 33(1))

## CONTENT AND FORMAT OF TECHNICAL REPORTS

The following technical reports shall substantially provide the details required.

## DAM DESIGN REPORT (FOR CLASS SD1, SD2 AND SD3 DAMS)

Item	Contents
1.	Details of location
2.	Details of hydrological assessment
3.	Details of design flood and return period
4.	Details of embankment
5.	Details of reservoir
6.	Details of draw-off and compensation works
7.	Details of spillway(s)
8.	Details of ancillary structures
9.	Details of construction materials
10.	Details of construction schedule
11.	Details of operational rules
12.	Procedures to notify and protect downstream inhabitants, infrastructure and environments
13.	Schedule of inspection and maintenance
14.	Assessment of impacts and risks

## DAM OPERATION REPORT

Item	Contents
1.	Basic summary of technical details
2.	Details of management structure for dam operations
3.	Details of operational and release rules
4.	Details of operation and maintenance systems
5.	Procedures to notify and protect downstream inhabitants, infrastructure and environments
6.	Schedule of inspection and maintenance

## DAM COMPLETION REPORT

Item	Contents
1.	Changes and explanation for differences between as-constructed and design details
2.	As-constructed drawings
3.	Summary of as-constructed details

## DAM INSPECTION REPORT

Item	Contents
1.	Current condition of dam with respect to approved design and “as-constructed” condition
2.	Any action required to restore the functional and structural integrity of the dam to the required state
3.	Any changes with regard to the risk of or impact in the event of dam failure
4.	Review appropriateness of the action plan in event of dam failure

## DAM DAMAGE OR FAILURE REPORT

Item	Contents
1.	Details of location
2.	Date and time of dam failure or damage
3.	Preceding climate
4.	Preceding hydrology
5.	Cause of dam failure or damage
6.	Steps taken to notify downstream inhabitants
7.	Nature and extent of damage caused to the dam or caused by the dam failure

## FOURTH SCHEDULE

(r. 35)

## FLOOD CONTROL WORKS REPORTS

The following technical reports shall substantially provide the details required.

## FLOOD CONTROL WORKS DESIGN REPORT

Item	Contents
1.	Details of location
2.	Details of hydrological assessment
3.	Details of design flood and return period
4.	Details of levee, dyke and floodwall
5.	Details of watercourse
6.	Details of ancillary structures
7.	Details of construction materials
8.	Details of construction schedule
9.	Details of operational rules
10.	Procedures to notify and protect downstream inhabitants, infrastructure and environments
11.	Schedule of inspection and maintenance
12.	Assessment of impacts and risks

## FLOOD CONTROL WORKS OPERATION REPORT

Item	Contents
1.	Basic summary of technical details
2.	Details of management structure for flood control works operations
3.	Details of operation and maintenance systems
4.	Procedures to notify and protect downstream inhabitants, infrastructure and environments
5.	Schedule of inspection and maintenance

## FLOOD CONTROL WORKS COMPLETION REPORT

Item	Contents
1.	Changes and explanation for differences between as-constructed and design details
2.	As-constructed drawings
3.	Summary of as-constructed details

## FLOOD CONTROL WORKS INSPECTION REPORT

Item	Contents
1.	Current condition of dam with respect to approved design and “as-constructed” condition
2.	Any action required to restore the functional and structural integrity of the flood control works to the required state
3.	Any changes with regard to the risk of or impact in the event of dam failure
4.	Review appropriateness of the action plan in event of flood control works failure

## FLOOD CONTROL WORKS DAMAGE OR FAILURE REPORT

Item	Contents
1.	Details of location
2.	Date and time of flood control works failure or damage
3.	Preceding climate
4.	Preceding hydrology
5.	Cause of flood control works failure or damage
6.	Steps taken to notify downstream inhabitants
7.	Nature and extent of damage caused to the flood control works or caused by the dam failure

## FIFTH SCHEDULE

(r. 19(1))

## PREMIUMS FOR USE OF WATER FROM STORAGE FACILITIES

In the case of a permit to abstract or divert water from a regulated river a premium shall be paid by the water user which shall be calculated using the formula herein:

$$\frac{(O \wedge M) + 20\% \times \text{allocation to individual water user} \in \text{MCM/year}}{\text{Annual Design Yield of Storage Dam} \in \text{MCM/year}} = \text{Ksh per year}$$

:

Where:

1. (O&M) is the Water Storage Authority's operation and maintenance costs of the dam releasing the water into the natural watercourse from which the abstraction or diversion occurs.
2. The allocation to individual water user is the water allocated by the permit to the individual water user in cubic metres per year.
3. Annual design yield is the design yield of the dam releasing into the regulated river in cubic metres per year.
4. The formula provides the basis for deriving the amount payable by the water user as a premium.

## SIXTH SCHEDULE

*(r. 58(1))*

## COMPLAINTS

## INFORMATION TO BE GIVEN BY COMPLAINANT UNDER THESE RULES

Item	Information
(a)	Name of Complainant
(b)	Contact address, telephone number, email address (if any) of Complainant
(c)	Nature and location of the problem
(d)	Date that problem occurred
(e)	Name and, if available, the contact details of all parties to the dispute or complaint
(f)	Any other relevant details
(g)	Signature of the Complainant

Made on the 19th February, 2025.

ERIC MURITHI MUGAA,  
*Cabinet Secretary for Water,  
Sanitation and Irrigation.*