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NATIONAL ENVIRONMENTAL STANDARDS AND
REGULATIONS ENFORCEMENT AGENCY
(ESTABLISHMENT) ACT, 2007

NATIONAL ENVIRONMENTAL (DAMS AND RESERVOIRS)
REGULATIONS, 2014



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S. L. No. 66 of 2014

**NATIONAL ENVIRONMENTAL STANDARDS AND
REGULATIONS ENFORCEMENT AGENCY
(ESTABLISHMENT) ACT, 2007**

**NATIONAL ENVIRONMENTAL (DAMS AND RESERVOIRS)
REGULATIONS, 2014**

In exercise of the powers conferred on me by section 34 of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007 and all powers enabling me in that behalf, I, MRS. LAURENTIA LARABA Mallam, Minister of Environment, make the following Regulations—

[9th Day of December, 2014] Commence-
ment.

PART I—GENERAL PROVISIONS

1.—(1) The objective of these Regulations is to control the effects of Dams and Reservoirs on the environment and human health. Objectives.

(2) The specific objectives are to—

(a) reduce or minimize environmental hazards and disasters such as dam break; sediment load and dam water releases causing downstream flooding and erosion ;

(b) protect, minimize and address negative impacts on freshwater, wetlands and water quality ;

(c) minimize the impacts from lowering the water elevation in a reservoir during a repair project, such as installing a temporary bufferdam, necessary to reduce detrimental impacts to fish and wildlife associated with the wetland environment and to reduce loss of aquatic vegetation that serves as wildlife habitat ;

(d) promote the best management practices through application of appropriate sedimentation, erosion and flood control measures to prevent and where necessary, limit flooding, swamping and water shortage ;

(e) protect and improve the chemical and ecological status of water systems and allowing water systems to serve socio-economic and environmental functions ;

(f) ensure effective use of dams and reservoirs to regulate river flow levels and flooding downstream of the dams by temporarily storing the flood volume and releasing it later ;

(g) ensure effective use of dams and reservoirs for the desired purpose ; prevent hazardous substances used during repairs and other dam activities from entering any adjacent water and freshwater wetlands to protect aquatic life ;

(h) ensure that the environmental impact of dams and reservoirs is managed in such a way that it does not adversely affect the desired operation of the facility ;

(i) restore or mitigate alterations to freshwater wetlands as deemed necessary by the Agency ;

(j) promote the best method to minimize pollution of freshwater ;

(k) ensure proper maintenance of the dam and the associated structures ; and

(l) provide for the safety of lives, property and the environment in the advent of disaster or emergency.

Application.

2. These Regulations apply to all Dams and Reservoirs in Nigeria.

PART II—ADMINISTRATION OF THESE REGULATIONS

Registration
with the
Agency.

3.—(1) The owner of an existing facility shall register with the Agency, within ninety (90) days of promulgation of these Regulations, by completing the registration form as specified in Schedules I and II to develop appropriate database.

(2) The owner of a new facility shall notify in writing and forward the design plan to the Agency to update the existing database.

Classification
of Dams.

4.—(1) A facility shall be classified by the Agency based on size and hazard potential as specified in Schedule VII to these Regulations.

(2) The Agency shall liaise with relevant authorities to determine the class of a Dam.

(3) The Agency shall maintain a list of all classified dams and make the list available to the public.

(4) The Agency in collaboration with the relevant authorities shall where appropriate, reclassify facilities.

PART III—GUIDING PRINCIPLES

Principles
for
Regulating
Facility.

5. The Guidelines set out hereunder shall be observed in regulating all facilities—

(a) the precautionary principle shall be observed, and that is to say, where there are threats of serious or irreversible damages, the absence of scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation ;

(b) the "Polluter-Pays-Principle" shall apply ;

(c) dams and reservoirs operations shall be conducted using the Best Available Technologies (BAT) that are environment-friendly and compatible with public health ;

(d) extraction of resources shall be carried out with adequate consideration of the environment (plant, man, animal and the general ecosystem) ;

(e) statutory national and international Facility Management Bodies shall co-operate in building better practice management through sharing of information, technology and professional expertise ; and

(f) adequate access to information and opportunity shall be provided for meaningful participation in planning, monitoring, ensuring compliance and encouraging best practices in the Facility.

6. Environmental Impact Assessment (EIA) shall be conducted by the project proponent and submitted to the Federal Ministry of Environment for all new Facilities before the commencement of operations as required by the EIA Act of 1992 and Environmental Impact Statement (EIS) submitted to the Agency.

Environmental
Impact
Assessment
(EIA).

7. Environmental Audit (EA) including Environmental Management Plan (EMP) shall be conducted on all existing Facilities every three (3) years and submitted to the Agency for review and Certification.

Environmental
Audit.

PART IV—PROHIBITION

8.—(1) Sewage (soak-away) for every service building and dwelling in the vicinity of the dam shall not be located within 500 meters to the reservoirs.

Prohibited
Activities.

(2) Fishing and boating shall not be carried out without obtaining permit from appropriate authority.

(3) Camping shall not be carried out without obtaining relevant permit from appropriate authority.

(4) Removal of vegetation and felling of trees around the storage area shall not be done without obtaining approval from appropriate authority.

(5) The use of hazardous chemical within the storage area is prohibited as specified in National Environmental (Chemicals, Pharmaceuticals, Soap and Detergent Manufacturing Industries) Regulations, 2009.

(6) Dams repair and maintenance shall be carried out using method that ensures the water quality is not polluted as specified in schedule IV to these Regulations.

9.—(1) A person shall not dump or discharge in any place on land or into the water of a storage area, any refuse, waste or material of any kind whatsoever which shall cause water pollution, but shall store it in containers suitable for the purpose.

Sanitation
and Waste
Control.

(2) Removal of the contents of containers referred to in sub-regulation (1) of this regulation from a storage area, shall take place by means of either waste removal service as established in terms of local authority or other legislation where such a service is available, or by the persons responsible for the contents of the containers.

(3) Where no waste removal service is available at a storage area, the contents of containers shall be removed by the appropriate person(s) to the nearest place where such a service is available.

(4) All waste from water closets, urinals, sinks, showers, wash basins, baths or any other facilities on board, shall be stored in a single storage tank.

(5) The storage tank shall have a capacity greater than the capacity of the on-board water tanks and/or containers. It shall be provided with a suction pipe and valve on top in order that it shall be connected to containers or an extraction system ashore to empty the contents thereof. No other outlets that can be opened on board shall be provided.

(6) The contents of storage tanks referred to in sub regulation (2) of this regulation or the contents of portable toilets, shall be disposed of by the removal thereof to existing toilet facilities or to municipal or private sewage systems as approved by the appropriate authority.

(7) Dump site or land-fill either private or government owned shall not be located within the storage area.

(8) All sewage shall be properly treated to acceptable standards in accordance with the National Environmental (Ground and Surface Water Quality Control) Regulations, 2011 before being discharged into rivers, streams or any other water body around the storage area.

PART V—RESTRICTED ACTIVITIES

Restricted
Activities in
Storage Area.

10.—(1) Commercial farming activities shall not be carried out within a distance less than 500 meters away from the storage area.

(2) Grazing, livestock watering and tourist activities shall be regulated by the facility/owner to minimize pollution.

(3) Industrial and Commercial activities (such as mining, lumbering and processing of wood, processing of agricultural and fishery products, etc) shall not be carried out within a distance of 750 meters away from the storage area.

PART VI—GUIDELINES AND STANDARDS

Standards
for Facility
Operation.

11. In addition to the guidelines, as specified in schedule V, the facility shall—

(a) not construct in an area having disastrous or negative impact on the environment;

(b) adequately provide instrumentation and properly maintain within the context of Schedule IV, all design, operation and maintenance of dams shall comply with global best practices ;

(c) carry out Dam Break Studies for all facilities ;

(d) have an Emergency Preparedness and Response Plan ;

(e) have capability to absorb the failure or releases of the upstream dam water ;

(f) have a different hazard potential classification from the downstream dam, if the failure flood wave of the upstream dam will not cause failure of the downstream dam ;

(g) ensure that a receptor dam is constructed at the downstream of any upstream dam located in a neighboring country ;

(h) ensure that no dam water is released if cleanup is not done, when polluted ;

(i) ensure that no land disturbing activities is carried out within 1000 meters to the bank of the reservoir without the approval from the management authority ;

(j) ensure that no sediment management method(s) are carried out without the approval of the Management authority ;

(k) ensure hydrographic surveys are carried out at least once in five years ;

(l) ensure that Environmental Flow in the ecosystem is maintained through adequate flow of water to the downstream ;

(m) disallow any chemical substance that can reduce water quality, increase salinity, introduce toxins and make the water unusable for drinking and irrigation in the dams and water bodies except with the approval of the Agency ;

(n) minimize clearing of vegetation at the project inception and remove slash material from adjacent freshwater wetlands and water bodies ;

(o) ensure that warning, danger and caution signs are provided within the reservoir area for general safety ;

(p) carry out maintenance in accordance with established operational procedures ; and

(q) ensure that functioning hydro-meteorological stations are mounted at strategic places.

12.—(1) Catchment area management and other measures for design shall be used to optimize the life expectancy of reservoirs and reduce the environmental impact on the river and stream valley.

Standards
for Design
and
Construction
of New
Dam.

(2) Facilities shall be constructed in accordance with extant regulations and the design shall be based on the standards as specified in Schedule III to these Regulations.

Protection of
Biodiversity.

13. A person shall protect the biodiversity and shall not kill or disturb any animal nor cut, destroy, uproot or harvest any plant in a storage area or introduce alien species without a permit issued by the appropriate authority.

Dam Break
Studies.

14.—(1) Dam Break Analysis shall form an integral part of the overall dam safety program.

(2) Dam Operators shall ensure that adequate safety measure(s) are provided in the event of any catastrophic failure such as sudden, rapid and uncontrolled water releases.

(3) Emergency Action Plan (EAP) shall address the inherent flooding hazards that may arise from the breach in a dam as a result of the sudden, rapid and uncontrolled release of water.

(4) Dam Operators shall put in place preventive measures to include —

- (a) Flood plain zoning ;
- (b) Flood plain mapping ; and
- (c) Issues of flood early warning.

(5) Dam Break Studies shall consist of the following—

- (a) Precipitation analysis ;
- (b) Hydrologic modeling ;
- (c) Dam breaching analysis ;
- (d) Dam break flood wave routing ; and
- (e) Inundation mapping of the resultant flood.

(6) Analysis of past incidences of flooding in the country shall be applied to develop a robust Emergency Response Plan (ERP) and future land-use planning.

(7) Dam Operators shall develop and apply Flood Early Warning (FEW) measures for all facilities.

Emergency
Plan.

15.—(1) The Dam Operators shall develop Emergency Action Plans (EAPs) for all dams in Nigeria to contain the following information—

- (a) guidance for evaluating emergency situations occurring at a dam ;
- (b) notification charts and emergency contact information ;
- (c) a list of residents, businesses and entities within the downstream inundation zone ;
- (d) a list of resources available for responding to a dam emergency ;

- (e) an inundation zone map (estimated boundary of the maximum water elevation resulting from a dam breach) ; and
 - (f) basic physical and geographical data for the regulated dam.
- (2) The Emergency Action Plans shall establish and maintain the following —
- (a) emergency contact information ;
 - (b) evacuation procedures ; and
 - (c) effective communication link between the Dam Operators and Emergency Management Authorities.
- (3) The Agency in collaboration with other relevant authorities shall develop and periodically review facility Safety Programs.
- (4) Emergency Management Authorities shall provide critical emergency contact information and assistance for dam safety and emergency response issues.
- (5) Emergency Preparedness and Response Plan (EPRP) shall be developed by the facility owners or operators in collaboration with relevant authority and ensure ownership and domestication by responsible Agencies to be reviewed every five years by responsible Agencies.
- (6) An EPRP shall provide all necessary information and instructions needed to allow an individual to respond to an emergency related to the dam.
- (7) Dam operator shall identify stakeholders and shall bring them together to jointly develop the Plan.
- (8) Respective roles and responsibilities at Federal, State and Local Government levels shall be considered and clearly stated by the Plan.

PART VII—PERMIT AND INSPECTION

16. Dredging of a facility shall be carried out with a permit issued by the appropriate authority in accordance with extant Regulations and also as specified in the National Environmental (Permit and Licensing System) Regulations, 2009 Permit.
17. The Agency shall carry out compliance monitoring and inspection of dams and their appurtenant works in line with the provisions of these Regulations. Inspection.
- 18.—(1) Owner of facility shall carry out annual safety assessment. Monitoring and Inspection.
- (2) Records of dam and reservoir safety activities and operations shall be made available for sighting during compliance monitoring and inspection by the Agency.

PART VIII—ENFORCEMENT

Enforcement
Notice.

19.—(1) An enforcement action shall be carried out as specified in Schedule VI to these Regulations and it may include the serving of enforcement notice.

(2) An enforcement notice shall be served if the Agency is of the opinion that an operator has contravened, is contravening or is likely to contravene any condition of a permit.

(3) An enforcement notice shall specify the—

(a) activities or matters constituting the contravention or making it likely that the contravention will arise, as the case may be ;

(b) steps that must be taken to remedy the contravention or to remedy the activities or matters making it likely that the contravention will arise, as the case may be ; and

(c) period within which those steps must be taken.

(4) An officer of the Agency may, in the course of his duty under these Regulations, at any reasonable time—

(a) enter and search any premises or facility to take samples or specimen for analysis, and measurements in length and/or of level of standards to which these Regulations relate ; and

(b) seize and detain for such time as may be necessary for the purpose of these Regulations any article by means of or in relation to which he reasonably believes any provision of these Regulations has been contravened.

Enforcement
Notice
Reminder.

20.—(1) Any operator who fails to comply with the terms of the enforcement notice issued pursuant to regulation 19 of these Regulations may be serviced a second notice.

(2) Failure to comply with the second notice or reminder within the specified time limit will lead to the issuance of a suspension notice, sealing of the facility, premises or any other punitive action as may be necessary.

Mode of
Delivery.

21. Mode of delivery of the enforcement notice shall be by hand, registered post or courier, electronic transmission, or be pasted at the facility or registered premises of the organization.

Suspension
of Permit.

22.—(1) Where a suspension notice is served under these Regulations, the permit shall upon the service of such notice, cease to have effect as stated in the notice.

(2) The Agency may withdraw a suspension notice after verification of compliance.

Equity.

23. Every facility shall be given equal treatment without preference as far as inspection and enforcement of relevant laws are concerned.

PART IX—OFFENCES AND PENALTIES

24.—(1) A person who causes damage to any Government or other property within a Storage Area commits an offence. Offences.

(2) A person who contravenes any of these Regulations or fails to observe any condition contained in a permit issued in pursuant to these Regulations, commits an offence.

(3) The Agency may have the right to refuse the carrying of a firearm or any kind of weapon into the storage area without a written approval from the appropriate authority.

25.—(1) A person who violates any of the provisions of these Regulations or commits an offence shall on conviction be liable to a fine not less than one million Naira (₦1,000,000.00) or to imprisonment for a term not less than two years or both such fine and imprisonment and an additional fine of ten thousand naira (₦10,000.00) for everyday the offence subsists. Penalties

(2) A corporate body that violates any of the provisions of these Regulations or commits an offence shall on conviction, be liable to a fine not less than five million Naira (₦5, 000,000.00) and an additional fine of fifty thousand naira (₦50,000.00) for everyday the offence subsists.

(3) In addition to sub regulations (1) and (2) the offender shall be responsible for the remediation of the damage to the environment and any affected properties therein.

PART X—MISCELLANEOUS

26. In these Regulations unless the context otherwise requires—

Interpretation.

“Agency” means the National Environmental Standards and Regulations Enforcement Agency ;

“Animal” means any vertebrate animal (excluding a fish and a poisonous snake) ;

“Biodiversity” means fauna and flora ;

“Dam” means any artificial barrier, together with appurtenant works, including but not limited to dams, levees, dikes or floodwalls for the impoundment or diversion of water or other fluids where failure shall cause danger to life or property ;

“Appropriate Authority” means a Federal, State or Local authority, Irrigation or Water Board or other Statutory body responsible for the management of dams and reservoirs ;

“Desired Purpose” means the reason for which the facilities exist ;

“Detailed inspection” means all studies, investigations and analyses necessary to evaluate conclusively the structural safety and hydraulic

capacity of a dam or reservoir and appurtenant works. This inspection shall include but is not limited to soil analysis, concrete or earth stability analysis, materials testing, foundation explorations, hydrologic analysis, including basin studies and flood potential. This inspection shall be performed by a registered engineer ;

"Director-General" means the Chief Executive and Accounting Officer of the National Environmental Standards and Regulations Enforcement Agency appointed under section II of the Act or any person or Authority acting on his behalf ;

"Distressed Dam" means the condition of a regulated dam, as determined by the Agency, is such that a risk of failure exists that will result in probable loss of human life or major economic loss ;

"Facility" means Dam and Reservoir ;

"Fish" includes crustacean and mollusca and water fauna in general and the eggs, hatch, spawn or the young of fishes and of such water fauna ;

"Fish Ladder" means a structure in or around artificial barriers in the dams to facilitate migration of fish between fresh and salt water ;

"Hazard Classification" the rating ranges from Low Hazard, significant hazard dam, to a High hazard dam ;

"Inspector" means an inspector designated as an environmental inspector ;

"Inspection" means visual examination of an existing dam or proposed dam site to determine the physical dimensions of the dam and reservoir and the hazard potential of the structure, irrespective of the structural safety of the dam itself ;

"Lifeline Facilities" means essential facilities within the catchment area, the loss of which can result in indirect threat to life. Facilities shall include transportation links (high ways, bridges, rail lines) and utility systems (electric power plant, gas and liquid fuel pipe lines, telecommunication system, water supply and waste water treatment facilities) ;

"Lead Agency" means any Ministry, Agency, Parastatal, Local Government system, or Public Officer in which or upon whom any law vests functions of control or management of any segment of the environment ;

"Management Authority" means the owner or operator of a dam ;

"Minister" means the Minister to whom the President has assigned responsibility for the Act ;

"Owner" means the person or persons who own, control, operate, maintain, manage or propose to construct a dam or reservoir including any individual, firm, partnership, association, syndicate, company, trust, corporation, Local government, Agency, political or administrative subdivision of the State or any legal entity of any kind holding legal title to a dam ;

"Operate a Dam or Reservoir" means to perform functions intended to preserve or protect the dam or reservoir (or the area potentially impacted by the dam or reservoir). Examples of operator functions include removal or replacement of flashboards, opening or closing of gates, removal of accumulated trash at the spillway, and maintenance functions such as mowing grass on the dam ;

"Posting" means the posting of a notice at the address of the owner or occupant of the premises or facility ; or the putting of a notice in a public or conspicuous place so that people including those the notice is meant for, can see it ;

"Person" means any person, body corporate or organisation ;

"Polluter-Pays-Principle" means a kind of payment attached to the extent of pollution ;

"Reservoir" means any basin, including the water, which contains or will contain the maximum amount of water impounded by a dam ;

"Seepage" means the migration of water through a dam foundation ;

"Storage Area" means the water surface and the submerged area of a Dam, as well as all surrounding land and also any Water Works in a Water Control Area in which such Dam is Situated, in respect of which the Agency exercises rights and privileges ;

"Tailings" means the material generated by a mining/milling operation, which is deposited in slurry form in an impoundment for storage and/or both ;

"Watershed" means the area that contributes or shall contribute surface water to a reservoir.

27. These Regulations shall be cited as the National Environmental (Dams and Reservoirs) Regulations, 2014. Citation.

SCHEDULES

SCHEDULE I

REGISTRATION AND NOTIFICATION

[Regulation 3 (1)]

(1) The owner of Facilities shall file an application with the Agency, within ninety (90) days of Promulgation of these Regulations, a fully completed registration form to be provided by the Agency.

(2) The owner of a regulated dam shall notify the Agency and the Appropriate Authority having jurisdiction, of the transfer of legal title of such dam or a change in the mailing address, telephone number or emergency contact person not later than sixty (60) days after the date of such transfer or change and provide to the Agency the new owner, mailing address, telephone number, or emergency contact person.

(3) The owner of a regulated dam, upon written request from the Agency, shall make available all the existing surveys, plans, drawings, designs and reports related to the dam, in possession of or available to the owner, that shall be required by the Agency for the purpose of environmental monitoring.

SCHEDULE II

REGISTRATION FORM FOR FACILITIES

[Regulation 3 (1)]

1. APPLICANT :

Name(s) :

Signature :

Address :

City :

State :

Local Government Area :

Telephone No :

E-mail :

2. PROPERTY OWNER(S) :

Name(s) :

Signature(s) :

Address :

City :

State :
Local Government Area :
Telephone No. :
E-mail :

3. DESCRIPTION OF THE FACILITY :

Address or Location of the Dam:
Hydrological Area :
State :
Local Government Area:
Longitude :
Latitude :
Altitude (m asl):
Assessor's Map No.:

DAM CHARACTERISTICS :

Type :
Height (m) :
Crest Length (m) :
Reservoir Area (km²) :
Reservoir Storage Capacity (MCM) :
Spillway Type :
Spillway Design Flood (m³/s) :
Catchment Area (km²):

OTHER INFORMATION ON THE DAM :

Purpose :
Instrumentation :
Year of Completion :
Consulting Engineer :
Contractor :
Certificate Number :
Date applied for :
Application No. :
Date Filed :
Approved :
Denied :

SCHEDULE III

STANDARDS FOR DESIGN OF FACILITIES

(1) Sediment trap shall retain gravel and sand which shall ensure evacuation of all the fine sand, silt and shale fractions.

(2) Residual water and sediment evacuation conduit shall provide the residual water downstream of the reservoir and sediments shall be evacuated, mainly during flood situations, without transition through the main reservoir and with a minimum damage to the riverine ecosystem.

(3) Water supply to the main reservoir shall be fed by a conduit that starts in the surface waters of the water trap, without any gravel or coarse and medium sand.

(4) The main reservoir shall be selected so that the final deep basin is characterized by simple biological structure and a short basin axis, to facilitate flushing of the basin sediments.

(5) Bottom outlet of the dam shall be used, if necessary, in combination with other passive and/or active measures to evacuate fine sediments from the deep basin by flushing operations.

(6) Fish ladder shall be constructed around or on the dam to facilitate migration of fish between fresh and salt water.

(7) Main conduit for hydroelectric or other reservoir use shall be maintained.

SCHEDULE IV

MAINTENANCE OF FACILITIES

[Regulations 8 (6) ; 11 (b)]

(1) Maintenance of a high hazard dam or significant hazard dam, except for certain cutting or removal of trees, does not require an approval from the Agency.

(2) To be exempt from Agency approval, the cutting or removal of trees must be limited to those trees with a diameter less than 6 inches (measured 0.6 metres above the ground level) or that does not affect the integrity of the dam.

(3) If trees have a diameter greater than 6 inches (measured 0.6 metres above the ground level) then the dam owner shall first consult with a qualified engineer who will determine if the cutting or removal could jeopardize the integrity of the dam.

(4) The owner shall obtain a written report from the qualified Engineer, if the qualified Engineer determines that the cutting or removal is not a threat to the integrity of the dam, and keep a copy of the report in file.

(5) The report does not have to be filed with the Agency. The owner shall file an application for repair of the dam in accordance with the

regulations if the qualified Engineer determines that the cutting or removal is a threat to the integrity of the dam.

(6) Mowing or cutting of vegetation shall be performed without an approval from the Appropriate Authority provided it is limited to areas on the dam and adjacent to the dam such that an area does not exceed five (5) metres from the embankment, spillway or low level control structure.

(7) All other mowing or cutting of vegetation within freshwater wetlands will require a permit from the appropriate authority unless specifically exempted under the National Environmental (Wetlands, River Banks and Lake Shore Protection) Regulations, 2009.

(8) Areas exceeding five (5) metres from the embankment, spillway or low level control structure that have been historically mowed and maintained are specifically exempted. These areas can continue to be mowed without a permit from the Agency.

(9) All maintenance activities shall comply with the following—

(a) best management practices for erosion and sediment controls shall be used. All controls must be maintained in effective operating condition during the activity, and all exposed soil and other fills must be permanently stabilized at the earliest possible date.

(b) all equipment used for maintenance activities shall be removed from any freshwater wetland upon completion of the maintenance project; and

(c) all repair and maintenance activities shall be protective of water quality and freshwater wetland functions and values so as to prevent pollutants, sediment, direct discharge of storm water runoff, or any material foreign to waters including freshwater wetlands, or hazardous to life, from entering any waters including freshwater wetlands.

SCHEDULE V

GUIDELINES FOR REGULATING DISTRESSED FACILITY

[Regulation 11]

(1) Whenever the appropriate authorities determine that a dam is distressed, it shall determine whether the water in the reservoir shall be drawn off in whole or in part, and the actions necessary to make the dam safe.

(2) The Agency may notify the owner or person maintaining or having control of the dam, by certified mail, that the dam is unsafe, the actions necessary to make the dam safe and a schedule to complete the actions.

(3) The Agency may notify the owner or person maintaining or having control of the dam, by certified mail that the dam is distressed after completing the inspection or after receiving an inspection report completed by a qualified Engineer.

(4) The Agency may issue an immediate compliance order stating the existence of the unsafe condition and the action deemed necessary to correct the unsafe condition. It shall order the water in the reservoir to be drawn off, in whole or in part. The immediate compliance order shall become effective immediately upon service or within such time as is specified by the Agency in such order.

(5) Any emergency action taken by the Owner of the facility shall immediately be reported to the Agency and the Local Government(s) in which the facility is located. The facility shall also report, by telephone within twenty-four (24) hours and in writing within three (3) days, the emergency action taken.

(6) If water has been drawn off or the dam has been altered pursuant to an order by the Agency, the reservoir shall not be refilled without approval of the Agency.

(7) If the Owner of the facility fails to comply with an order, the Agency

SCHEDULE VI
ENFORCEMENT ACTIONS

[Regulation 19 (1)]

(1) As set forth by Section 8 of the National Environmental Standards and Regulations Enforcement Agency (NESREA) Act 2007, the Agency may have the power to issue enforcement notices, orders, administrative penalties or other requirements to ensure compliance with these Regulations.

(2) The Agency may also provide written or verbal warning of its intent to undertake enforcement action. Nothing in these Regulations shall limit the authority of the Attorney General of the Federation to prosecute offenders as required by law.

(3) The Agency may forward a copy of the enforcement notices and/or orders to recognized court of law in accordance with the laws of the land and the State Government wherein the dam is located.

SCHEDULE VII
DAM CLASSIFICATION

[Regulation 4 (1)]

(1) All dams and reservoirs subject to these Regulations shall be classified according to their size and hazard potential. Classifications shall be made in accordance with this section and are subject to final approval by the appropriate authority. It may be necessary to reclassify dams as additional information becomes available.

General.

(2) The classification for size is based on the height of the dam and storage capacity. Size classification may be determined by either storage or height, whichever gives the larger size capacity as specified under the FGN

Size
Classification.

B 916

8.	2.
1.	
2.	
3.	
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32.	Guzan	2	Niger	Guzan	Yiko			20.00	20.00	67.00	UC	IR, FI
33.	Guzu-guzu	8	Jigawa	Giwarzo	Guzuguzu	7" 57'	11" 56'	17.40	24.60		1979	IR, RC, FI, WI.
34.	Idofian	2	Kwara	Ifelodun	Idofian	4" 41'	8" 21'	12.00		12.60	1996	WS

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96.	Tenti	4	Plateau	Bokkos	Tenti	8" 48'	9" 22'	14.10	114.00		1943	HE
97.	Tiga	8	Kano	Rano	Kano	8" 40'	11" 15'	54.20	1,968.00	3,257.00	1975	IR, WS, FI
98.	Tomos	8	Kano	Danbatta	Tomos	8" 40'	11" 20'	13.72	60.30		1976	IR, WS, FI, RC, WI
99.	Tudun Wada	8	Kano	Tudun Wada	Waina	8" 25'	11" 15'	21.00	20.80		1977	IR, FI, RC
100.	Tungankawo	2	Niger	Wushishi	Bankugi	6" 07'	9" 40'	11.75	22.00	200.00	1988	IR, WS, FC
101.	Turo Malumfashi	1	Katsina	Malumfashi	Borindawa	7" 45'	11" 50'	12.00	3.37	220.00		WS
102.	Usuma (Main)	2	FCT	Bwari	Usuma	7" 30'	9" 10'	45.00	120.00		1984	WS
103.	Usuma (Saddle)	2	FCT	Bwari	Usuma	7" 30'	9" 10'	20.00	120.00		1984	WS
104.	Warwade	8	Jigawa	Dutse	Dodunnu Warwade	9" 20'	11" 50'	10.00	12.30			IR, WS, FI, RC, WI
105.	Watari	8	Kano	Bagwai	Watari	8" 08'	12" 10'	19.81	104.55		1980	IR, WS, FI, RC, WI
106.	Yakubu Gowon	4	Plateau	Barkin Ladi	Shen	8" 55'	9" 55'	35.00	30.00	248.00	1980	WS
107.	Zaria	2	Kaduna	Zaria	Galna	7" 50'	11" 10'	15.00	15.91	707.90	1974	WS, FI, RC
108.	Zobe	1	Katsina	Zobe	Karaduwa	7" 30'	12" 30'	18.90	177.00	1,087.00	1983	IR, WS
109.	Zuru	1	Kebbi	Zuru	Gimache	5" 15'	11" 24'	15.00	5.85	432.00	1978	WS

Source : FGN (2007), Compendium of Nigerian Dams Their Briefs, Statistics and Purposes. Compiled, produced and published by Department of Dams and Reservoir Operations, Federal Ministry of Agriculture and Water Resources, Abuja.

2. Mammal Dams

No.	Name	Alt.	State	Loc.	Acres	Length	Width	Height (m)	Capacity (ac ft)	Spill Point (m s)	Year	Purpose
1	Arkwell 2	4	Plateau	Barkin Ladi	Leoni	8' 40"	9' 20"	9.00	1.16	343.00	1963	III:
2	Asa	6	Kwara	Ibora South	Asa	4' 33"	8' 27"	27.00	43.60	7,960.00	1978	WS
3	Chuan	3	Gombe	Bahanga	C. Kan	1' 53"	9' 45"	10.00	5.00	200.00	1991	IR, WS
4	Ekoyindas	6	Oson	Ududu	C. Kan	4' 35"	7' 56"	13.70	5.45	877.30	1973	WS
5	Ido	6	Oyo	Saka	Ido	3' 22"	8' 41"	14.63	0.67	127.35	1966	IR, WS, FI
6	Ido	8	Bauchi	Bauchi	C. Kan	9' 50"	10' 20"	27.00	38.40	783.00	1990	IR, WS, WI
7	Ibadun Adanu	8	Jigawa	Kozama	W. Kan	8' 25"	12' 38"	9.14	8.00		1974	IR, WS, RC, FI, WI
8	Ibanc	6	Ondo	Asara	Asara	5' 45"	7' 15"	11.70	7.70		1958	WS
9	Jekko 1	4	Plateau	Rygon	Sanga, Kanti	8' 41"	9' 23"	9.75	1.40	685.00	1937	III:
10	Kubom	2	Kaduna	Zana	Kubom			8.50		10.00	1975	WS
11	Lamungo (K. Sanyo)	4	Plateau	Jos North	Rain Sanyo	9' 10"	9' 56"	11.50	0.45			WS
12	Lassal	4	Bauchi	Ushangbo	Agbuda	9' 02"	7' 06"	15.10	4.06	151.00	UC	IR, WS
13	N' G. Call	4	Plateau	Basa	N' G. Call	8' 38"	9' 49"	9.00	0.03	108.00	1923	WS, III:
14	Noka	7	Bauchi	Aukpa	Noka	8' 25"	7' 36"	8.50	2.50	21.00	1986	IR, WS, FI
15	Ologunji	4	Bauchi	Agatu	Ibala	7' 55"	7' 45"	8.10	1.10			IR, WS
16	Opeki	6	Oyo	Iwasa	Opeki	5' 20"	7' 30"	10.50	2.60	778.00	1967	WS
17	Waga	3	Bauchi	Bauchi	Waga	10' 30"	10' 10"	18.00	30.60	60.00	UC	

Source: UFR (2007). Compendium of Nigerian Dams: Their Types, Statistics and Purposes. Compiled, produced and published by Department of Dams and Reservoir Operations, Federal Ministry of Agriculture and Water Resources, Abuja.

3. SMALL DAMS

S/N	Name	H.I	State	LGA	River	Long	Lat	Height (m)	Capacity (MCM)	Spill Flood (m ³ /s)	Year	Purpose
1.	Achida	1	Sokoto	Wurno	Storm Water Runoff		5° 25'	13° 20'	4.00			
2.	Amazatu/ Amaigbo	5	Imo	Isula Mbano	Nwagelu			8.50		1.50	1958	WS
3.	Awira	6	Ondo	Akoko NE	Ashodi	5° 40'	7° 30'	11.70			1958	IRR, WS
4.	Ayede			Oye	Ayede	5° 20'	7° 53'	13.00	1.50		1979	WS
5.	Balanga	4	Gombe	Balanga	Balanga	11° 55'	9° 55'	4.40	72.70	2,500.00	1986	IR
6.	Benue Valley	4	Adamawa	Fufore	Bei	12° 11'	9° 36'	2.50	1.00			IR, FI, IS
7.	Birnin Kudu	8	Jigawa	Birnin Kudu	Dogwalo	9° 28'	11° 26'	6.71	1.19		1970	IR, WS, FI, RC
8.	Dmawa	1	Sokoto			5° 25'	13° 20'	4.00	0.15			
9.	Ebunwana	5	Abia	Alfipo	Igwugwe	7° 43'	5° 47'					WS
10.	Eleyele	6	Oyo	Odeda	Apete	4° 05'	7° 45'	2.44	7.05	367.80	1942	WS
11.	Enuwa	6	Oyo	Ibarapa	Opeki	3° 22'	7° 31'	11.00	2.60	778.20	1967	WS, FI
12.	Ezzangbo	5	Ebonyi	Ezzangbo	Aboine	7° 56'	6° 24'	2.44	8.20		1964	WS
13.	Girei	3	Adamawa	Mayobelwa	Girei	12° 35'	9° 20'	5.00	0.25	10.00		WS
14.	Guma	7	Benue	Guma	Baka	8° 54'	7° 53'	9.20	6.50		1999	IR, WS
15.	Igbeti	6	Oyo	Olorunsogo		4° 09'	8° 45'	10.00	0.92		1986	IR, WS
16.	Ikpoba	6	Edo	Ergor	Ikpoba	5° 38'	6° 22'	8.00	1.50	105.00	1958	WS
17.	Iku	2	Niger	Suleja	Iku	7° 30'	9° 10'	7.00	2.30			WS
18.	Jekko 2	4	Plateau	Riyom	Sanga	8° 56'	9° 53'	6.00	0.01		1950	HE, WS
19.	Karami	4	Plateau	Jos South	Karami	8° 17'	10° 37'	15.00	0.30			IR, WS
20.	Karkirko	1	Sokoto			5° 25'	13° 20'	7.00	0.24			
21.	Kisi	6	Oyo	Irepo	Tege Bandara	3° 56'	9° 03'	11.00	0.53		1985	IR, WS, FI
22.	Kogingiri	4	Plateau	Jos No. 3	Kogin Giri	8° 56'	9° 53'	8.23	0.21	19.00	1935	WS
23.	Konshisha		Benue	Konshisha	Konshisha			15.00	44.00	1.00		IR, WS
24.	Kwa	4	Plateau	Qu'an Pan	Harvested Rain Water	9° 15'	9° 01'	6.00	0.20		1996	IR, WS
25.	Kwall Stream	4	Plateau	Bassa	Ource	8° 39'	9° 48'	9.00	0.63	271.00	1923	WS, HE
26.	Lafia	4	Nassaraawa	Lafia	Amba	8° 30'	8° 30'	4.00	0.20	170.00		WS
27.	Lokpanta	5	Abia	Okigwe	Edede	9° 00'	6° 00'	0.30		12.00	1987	IR, WS
28.	Malete	2	Kwara	Moro		4° 27'	8° 45'	6.00	5.85			

29	Mamona	1	Sokoto	Wurno	Sahon Garin Kwandaba	5° 25'	13° 20'	7.00	0.28		IR, LS	
30	Misibil	1	Katsina	Jagawa	Kuki	8° 02'	12° 36'	3.40	0.77			IR, WS
31	Nassarawa	4	Nassarawa	Nassarawa	UKI	7° 42'	8° 33'	3.00	0.60	150.00	1984	WS
32	Nkari	7	Akwai Ibom	Ibi	Ibom	7° 41'	5° 23'	11.50	3.50	180.00	UC	
33	Obaiga-Ohaekwe	7	Ebonyi	Ikow South	Okpara	8° 07'	6° 03'	3.60	0.03		1989	WS
34	Obudu	7	Cross River	Obudu	Abeb	9° 10'	6° 40'	15.00	2.50	165.00	1999	IR, WS, FI
35	Ofiki B	6	Oyo	Atisbo	Onki	3° 20'	8° 28'	12.30	0.60		1961	IR, WS
36	Ogboro	6	Oyo	Saki East	Opeki	3° 37'	8° 45'	6.00	0.32	7.00	1986	IR, WS
37	Ohaekwe	7	Ebonyi	Abakaliki		8° 15'	6° 11'	3.60	0.30		1989	WS
38	Oke Odan	6	Ogun	Yewa South	Ojumo Oke-Odan	2° 54'	6° 43'	12.00	5.50		1995	IR, WS
39	Omu-Aran	2	Kwara	Irepodun	Orisa/ Roro	5° 07'	8° 09'	6.00		52.00	1978	WS
40	Rijau	2	Niger	Rijau	Butula	5° 10'	11° 05'	7.00	1.30	40.00	1990	IR, WS
41	Rimin Gado	8	Kano	Rimin Gado	Rimin Gado			7.04	0.26			WS, RC
42	Sepeteri A	6	Oyo	Saki East	Adewale	3° 45'	8° 35'	13.60	2.60		1984	IR, WS
43	Sepeteri B	6	Oyo	Saki East	Apo	3° 38'	8° 34'	13.50	1.90		1989	IR, WS
44	Suru	1	Kebbi	Suru		4° 02'	12° 05'	6.30	5.00	83.00		IR, WS
45	Telle-Maribe	4	Plateau	Bokkos	Rafin Sanyin	8° 51'	9° 58'	7.60	0.41		1961	IR, WS
46	Ukhun/Echa	6	Edo	Esan West	Okwego	6° 10'	6° 51'	12.00	0.80	82.10	1994	IR
47	Umogidi	7	Benue	Umogidi/Aduka	Ogabakpa	7° 59'	7° 33'	5.50	2.50		1986	IR, WS
48	Ureje		Ekiti	Ado-Ekiti	Ureje	5° 13'	7° 35'	12.00			1957	
49	Wareke	6	Edo	Esan East	Owan East	6° 57'	6° 11'	4.50	0.65		1990	IR
50	Wurno	4	Sokoto	Wurno	Rina (Bala creek)	5° 24'	13° 14'	8.00			1960	IR, WS
51	Wumabba	5	Adamawa	Mayobakwa	Harvested Rainwater	12° 01'	9° 40'	3.00	1.00		2005	IR, LS
52	Yakurr	7	Cross River	Yakurr	Mgheke	8° 08'	5° 51'	2.20	0.65		1984	IR, FI
53	Yala	3	Adamawa	Yala	Chanchi	12° 30'	9° 10'	5.00	0.30		1983	

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