

NATIONAL ENVIRONMENTAL SOIL EROSION AND FLOOD CONTROL REGULATIONS, 2011



# Federal Republic of Nigeria Official Gazette

No. 39

Lagos - 2nd May, 2011

Vol. 98

Government Notice No. 125

The following is published as Supplement to this *Gazette* :

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Printed and Published by The Federal Government Printer, Lagos, Nigeria  
FGP 68/72011/400 (OL34)

Annual Subscription from 1st January, 2011 is Local : ₦15,000.00 Overseas : ₦21,500.00 [Surface Mail] ₦24,500.00 [Second Class Air Mail]. Present issue ₦1,500.00 per copy. Subscribers who wish to obtain *Gazette* after 1st January should apply to the Federal Government Printer, Lagos for amended Subscriptions.

# NATIONAL ENVIRONMENTAL (SOIL EROSION AND FLOOD CONTROL) REGULATIONS, 2011



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## NATIONAL ENVIRONMENTAL (SOIL EROSION AND FLOOD CONTROL) REGULATIONS, 2011

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 other powers enabling me in that behalf, I, MR JOHN ODEY, Honourable Minister, Federal Ministry of Environment hereby make the following regulations :

[28th Day of April, 2011]

Commence-  
ment.

### PART I—GENERAL PROVISIONS

1. Part I of these Regulations applies to general information on soil erosion and flood, while Parts II and III apply to regulated activities to enforce soil erosion and flood control.

Application.

2.—(1) The general objectives of these Regulations are to :

Objectives.

- (a) protect human life and the environment ;
- (b) minimize losses due to flood and erosion and their effects on vulnerable areas by regulating land-disturbing activities ; and
- (c) control accelerated soil erosion, flooding and sediment deposition in water bodies and water courses in order to prevent pollution of these water resources.

(2) The specific objectives of these Regulations are to :

- (a) restrict or prohibit land disturbing activities/uses which are dangerous to health, safety and property due to water induced erosion caused by increased flow velocity and volume/depth of surface run-off ;
- (b) ensure that projects on sites that are vulnerable to flooding, including facilities which serve such projects, are protected against flooding by appropriate design at the time of initial construction ;
- (c) regulate or minimize the alteration of natural floodplains, stream channels, and natural protective barriers, which are responsible for the accommodation and conveyance of flood waters ;
- (d) regulate filling, grading, dredging and other development projects which may increase soil erosion or flooding incidence and damage ;
- (e) prevent or regulate the construction of flood barriers and other structures capable of diverting or escalating flood waters or which may increase flood hazards on human settlements and related infrastructure ;
- (f) protect drainage infrastructure ; and
- (g) impose penalties on violators.

(3) It is the purpose of these Regulations to promote the health, safety and general welfare of the people and to minimize losses due to flood and erosion incidences in vulnerable areas, in line with the Guidelines for Flood Control of the Federal Ministry of Environment, 2005.

(4) Specifically the regulations are to :

(a) prohibit, regulate or issue permit for straightening, changing, diverting or interfering in any way with existing channel of a river, creek, stream, watercourse or changing or interfering with wetlands or watersheds ;

(b) prohibit, regulate or issue permit for development that has potential to cause flood, soil and beach erosion, pollution and land degradation ;

(c) permit and promote public welfare by guiding and controlling the design, construction, use and maintenance of any development or activity that disturbs the soil while keeping downstream flood, erosion and sedimentation at risk-free levels ;

(d) protect adjacent landowners from property loss due to sedimentation, erosion, and flood ;

(e) protect country and township ditches, culverts and all drainage systems from loss of capacity due to siltation ; and

(f) protect water and habitat quality in all watercourses and bodies from silt-laden water to ensure free flow of rivers, streams, etc., throughout the country.

Purpose.

3.—(1) The Agency adopts these Regulations to establish technically feasible and economically reasonable standards and procedures to achieve appropriate level of management and conservation practices to abate soil erosion, siltation and sedimentation of the waters of Nigeria, due to soil erosion and flood aggravated by non-agricultural earth-disturbing activities.

(2) The purpose also includes the sustainable protection and enhancement of the ecological integrity of flood plains as well as vulnerable lands and waters of Nigeria from significant adverse effects of environmental degradation resulting from persistent soil erosion, flooding and deposition of sediments.

Scope.

4.—(1) These Regulations apply to all earth-disturbing activities under regulation 9(1) of these Regulations performed on unincorporated lands of Nigeria being used or developed for non-agricultural, commercial, industrial and residential purposes, including but not limited to, individual or multiple lots, subdivisions, multi-family developments, commercial and industrial developments, recreational projects, general vegetation clearing and grading projects, underground utilities, highways, building activities and all other uses.

(2) These Regulations shall cover the following specific areas :

(a) areas adjacent or close to the shoreline of lakes that are affected by the flood, erosion or dynamic beaches ;

(b) areas within and adjacent to river or stream valleys ;

(c) areas that are susceptible to the hazards of flood and erosion including built-up environment ;

(d) areas within and adjacent to wetlands ;

(e) areas within and adjacent to hills ;

(f) areas of visible gullies or those prone to gulling or rapid gulling formation ; and

(g) other ecologically fragile areas that may be designated by the Agency.

5.—(1) The Agency shall administer these Regulations in collaboration with relevant MDAs, States and Local Governments and shall be responsible for the determination of compliance with these regulations and shall issue notices and orders as may be necessary from time to time.

Administra-  
tion.

(2) These Regulations are not to the exclusion of the Technical Guidelines on Erosion and Flood Control published by the Federal Ministry of Environment (2005), and such other guidelines, at national or international levels that may from time to time be published by appropriate authorities.

6.—(1) The Agency, in collaboration with the relevant Ministries, Departments and Agencies (MDAs), States and Local Governments shall conduct an inventory of storm water collection systems of towns and cities in Nigeria. The inventory shall include catchment basins, manholes, pipes, culverts, ditches, bridges, streams, rivers, ponds, dams and other features of the existing collection systems for the purpose of identifying erosion susceptible areas or locations.

Inventory of  
Erosion and  
Flood .

(2) The Agency in collaboration with the relevant Ministries, Departments and Agencies (MDAs), States and Local Governments shall enforce all environmental management programmes arising from such erosion and flood inventory, to ensure strict adherence to approved Environmental Impact Statement and Policies.

(3) The Agency shall enforce all Storm Water Management Programmes through :

(a) establishing procedures for public participation ; and

(b) monitoring and ensuring compliance with the Flood and Erosion Technical Guidelines set out by the Federal Ministry of Environment (2005) and any amendment thereof.

(4) The Agency shall in collaboration with relevant States and Local Governments publish the inventory of erosion and flood occurrences every five years to reflect the current state of erosion and flood prone areas as well as appropriate control or management measures to be taken.

Compliance  
with  
Standards.

7.—(1) All new construction and substantial improvement in the erosion and flood susceptible areas shall be in compliance with the Zoning Act, Municipal Development Guidelines and Building Codes, as well as Standards set from time to time by the Agency.

(2) An earth-disturbing activity shall be considered to be in conformity with these regulations if the soils have been prevented from being deposited into adjacent properties right-of-way, public storm drainage systems, wetlands or water courses.

(3) The designs, testing, installation and control of erosion, flood and sedimentation, facilities and operations shall adhere to specified standards.

(4) Any earth disturbing activity for construction shall not be conducted in a manner that shall create gully sites, burrow pits or courses that will exacerbate erosion or impede free flow of water in public drainages and natural water channels.

Exemptions  
from certain  
activities.

8. The following activities shall be exempted from these Regulations :

(1) Sustainable and best agricultural and silvicultural practices including the following activities :

- (a) livestock grazing ;
- (b) planting or cultivating crops ; and
- (c) tree planting

(2) Operations in areas the Agency has granted a permit and these shall include, but not limited to :

(a) carrying out any development activity requiring an Environmental Impact Assessment ; and

(b) temporary camping or other temporary recreational facility for tourist purposes.

(3) A property containing an existing single family residence with any earth work activity not related to urban development.

(4) Any non-residential earth work where the volume of material does not exceed 91 cubic metres or where the area disturbed does not exceed 50 square metres.

(5) When the Agency has determined that :

- (a) the amount of earth work will not cause erosion hazard, or
- (b) the topography and the density of the existing vegetation are sufficient to prevent erosion hazard.

(6) The Agency in consultation with other relevant MDAs may approve a waiver of a provision of these regulations where strict adherence to these requirements will result in unnecessary hardship and not fulfil the intent of these Regulations. The Agency shall not grant a waiver unless, and until sufficient specific reasons justifying the waiver, are provided by the owner/proponent.

(7) The Minister or a designated representative shall have the power to determine if an activity qualifies for exemption or waiver which shall be in writing.

9.—(1) A person shall not cause or permit to be caused any earth-disturbing activities such as grading, sand dredging, sand mining resulting to pithole in commercial quantity, blocking of water channels or drainages, mining, bush burning, deforestation, excavating or filling especially in vulnerable sites except in compliance with the requirements set forth under sub-regulation (2) of this regulation.

Regulated  
Activities.

(2) When a proposed earth-disturbing activity on land being developed, either wholly or partially, for residential, commercial, industrial or other non-agricultural purposes consisting of two (2) or more contiguous hectares of land owned by one person, or operated as one development unit, falls in areas identified as prone to flood and erosion, the proponent shall prepare and file an application for permit with the Agency and/or the State Government.

(3)(a) Any earth-disturbing activity shall not be exempted from compliance with the provisions of these Regulations.

(b) person(s) undertaking any earth-disturbing activity must file an application for permit with the Agency or the State Government prior to undertaking any such earth-disturbing activity.

(4) Strip and Surface mining operations regulated by collaboration of the Agency and the Federal Ministry of Mines and Steel Development or any other State Ministries and Agencies, shall comply with the provisions of these Regulations.



## PART II—EROSION CONTROL REGULATIONS

**10.—(1)** Proponents of earth-disturbing activities shall prepare Erosion Control Plan in line with extant Guidelines and Standards on Soil Erosion.

(2) The Erosion Control Plan shall be submitted along with an application for permit to the Agency for review, not less than forty-five (45) days prior to any earth-disturbing activity.

(3) The Erosion Control Plan shall contain narratives, engineering designs, and evaluation that explain specifications and practices to prevent soil erosion during and after construction activities.

(4) The submitted Erosion Control Plan shall be reviewed and the application for permit processed in accordance with National Environmental (Licensing and Permitting) Regulations 2009, for approval by the Agency prior to the commencement of any earth-disturbing activity.

(5) Erosion control practices used to satisfy the performance criteria of these rules shall meet the specifications provided under Regulation 11 of these Regulations.

(6) The Erosion Control Plan shall be certified by a licensed professional Civil Engineer, or Hydrological Engineer, Engineering Geologist, Geotechnical Engineer or Agricultural Engineer, registered with the Council for the Regulation of Engineering in Nigeria (COREN) or Council of Mining Engineers and Geologist (COMEG) as the case may be, before the approval of the Agency.

(7) An Erosion Control Plan may be approved if it complies with the Erosion Control Plan prescribed in Schedule I to these Regulations.

(8) An Erosion Control Plan may be disapproved if it fails to comply with the guidelines outlined in Schedule II to these Regulations.

(9) Municipal Development Agencies shall incorporate proper drainage infrastructures to minimise or abate soil erosion hazards resulting from siltation and concentrated urban storm run-off.

(10) Areas already devastated by erosion with visible gullies and susceptible to landslides, shall be designated Erosion Disaster Areas and, therefore, reserved for immediate rehabilitation by relevant authorities.

(11) Erosion Disaster Areas and all other areas prone to erosion hazards shall be delineated for special rehabilitation measures including afforestation and reforestation with adaptable plant species.

(12) The local Community shall ensure the restriction of slash and burn farming practices

11.—(1) Installation of erosion and sediment perimeter controls as stipulated under Schedule III to these Regulations shall be the first action of construction prior to any earth-disturbing activity.

(2) Concentrated storm water run-off and overland flow from bare soils shall pass through a sediment control device before leaving the earth-disturbing site boundaries and such run-off water shall be treated in a settling pond, sediment control structure or other approved sediment barrier.

(3) All earthen structures which include basins, water diversions, dams, work along streams and other site modifications shall be seeded and mulched within seven (7) days of installation.

(4) All critical areas within fifteen (15) metres of a stream bank or wetland unattended to for fourteen (14) days of disturbance shall be stabilized within two (2) days.

(5) A temporary stream crossing must be provided if vehicles will be crossing regularly during construction and during such construction activities, soil shall not be put into or placed close to the stream in such a manner that it may erode, slough or slip.

(6) Temporary soil stabilization shall occur within seven (7) days after rough grading if the area will remain inactive longer than thirty (30) days during earth-disturbing activities.

(7) Permanent soil stabilization shall occur seven (7) days after final grading has been reached.

(8) Permanent vegetation shall cover 80% of the soil surface and will be nurtured enough to survive dry season conditions.

(9) Any soil which will be stockpiled must be stabilized or protected to prevent soil loss.

(10) Any soil, rock, debris, or any other material shall not be dumped or placed into such proximity that it may readily slough, slip or erode into a water body.

(11) Unstable soils prone to slipping or landslides shall not be graded, excavated, filled nor have loads imposed upon them unless the work is done in accordance with a professional engineer's recommendations to correct, eliminate or adequately address such problems.

(12) Cut and fill slopes shall be designed and constructed in a manner which will minimize erosion, by considering the length and the steepness of the slope, soil type, up-slope drainage area, groundwater conditions and slope stabilization.

(13) All channels and outfalls shall be constructed to withstand expected flow velocity from a post-development design for a Ten (10) Year Frequency Storm without eroding.

(14) All storm sewer inlets accepting storm water run-off from the development area shall be protected from sediment-laden water entering the storm water system without treatment.

(15) All temporary and permanent erosion and sediment control practices shall be designed and constructed to minimize maintenance requirements.

(16) The Agency must be notified as to who will be responsible for the maintenance of the permanent and temporary erosion and sediment control measures.

(17) Site demobilisation (clearing of equipment etc from site) shall be completed within 30 days after final site stabilization is achieved or after the temporary practices are no longer needed.

(18) All techniques or procedures to control erosion, flood and sedimentation shall be carried out in accordance with established standards and guidelines for designing site plans and erosion control design in the form of a manual.

Disclaimer of Liability.

12. Compliance with the provisions of these Regulations shall not absolve any person from liability for damage to any person or property otherwise imposed by law.

Performance Standards.

13.—(1) A person shall not cause or be allowed to cause earth-disturbing activities on a development area except in compliance with the criteria established by these regulations.

(2) Erosion and sediment control practices used to satisfy the performance, standards and specifications shall meet the regulations for the time being in force.

PART III—FLOOD CONTROL REGULATIONS

Flood Control Guidelines.

14.—(1) All infrastructural development shall incorporate appropriate flood control measures, including but not limited to the provision of surface and subsurface drainage facilities, dams, flood walls, high flow diversions and planting of trees, shrubs and grasses.

(2) The Agency shall ensure that the States, Federal Capital Territory and Local Governments shall prohibit the siting of facilities and major structures in identified high risk areas.

(3) A building permit, zoning permit, site plan approval and/or special exemption shall be obtained from the appropriate authority(ies), before construction or development begins within any area vulnerable to flood hazard.

(4) Applicants shall comply with the Zoning and Building regulations and in compliance with laws and by-laws of the particular State or Local Government.

(5) All infrastructural development and constructions involving water diversions shall not terminate drainage system into any settlement or build-up area.

(6) The Applicant shall ensure that affected community(ies) and the relevant Agency(ies) are notified prior to any alteration or relocation of a watercourse and maintenance shall be provided within the altered or relocated portion of the said watercourse, so that the flow carrying capacity is not diminished.

(7) The Applicant shall obtain all other relevant permit at Federal and State levels including Stream Channel Encroachment Line Permit, Water Diversion Permit, Dam Safety Permit, etc.

(8) Appropriate flood control measures shall be incorporated in any rural or urban development project.

(9) Construction, reconstruction, extension of any building or structure, or any other development, including but not limited to mining, dredging, filling, grading, paving, excavation or drilling operations are prohibited in the Special Flood Hazard Area, except in compliance with these regulations.

(10) The Agency shall in collaboration with appropriate authority(ies) make the necessary interpretation, where needed, as to the exact location of boundaries of the areas of special flood hazard, for example, where there appears to be mapped boundary and actual field conditions.

(11) All new constructions and substantial improvements shall be anchored to prevent floatation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy especially in the coastal areas.

(12) All new constructions and substantial improvements shall be executed with materials resistant to flood damage.

(13) All new constructions and substantial improvements to structures shall be executed in accordance with the National Building Code and to ensure that electrical, heating, ventilation, plumbing, air conditioning equipment and

other service facilities are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of Flood.

(14) All new constructions and substantial improvements shall be executed using methods and practices that minimize flood damage.

(15) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

(16) All applicants shall ensure the use of new and replacement sanitary sewage systems, designed to minimize or eliminate infiltration of flood waters into the systems and discharge from the systems into flood waters.

(17) Every facility owner shall be liable for the clearing of the drainage channel within and outside the facilities, be it residential or commercial building to guard against blockage of the channel.

(18) Within bounds of possibility and reasonability, any person potentially affected by flood is obliged to undertake measures to prevent flood-related risks, and to reduce flood damage, particularly to the people, the environment or material assets therein, notwithstanding the aforementioned guidelines.

Permit.

15. The applicant shall provide information to the Agency in the standard application form as prescribed in Schedule IV to these Regulations showing that any proposed building sites will be reasonably safe from Flood and Erosion.

Flood  
Control  
measure.

16. Where base flood elevation data or floodway data have not been provided, the Agency shall obtain, review and reasonably utilize any base flood elevation or floodway data available from Federal, relevant State or other source in order to enforce these regulations.

Warning and  
Disclaimer  
of Liability.

17. These regulations shall not create liability on the part of the Agency, or any approving Body or employee thereof for any Flood and Erosion damages that result from reliance on these regulations or any administrative decision lawfully made there under.

Inspection  
and  
Enforcement  
Actions.

18.—(1) The Agency may inspect any earth-disturbing activity on unincorporated lands and any facility in Nigeria, to determine compliance with these regulations.

(2) The Agency reserves the right to request for on-site modifications of any Flood Control Measure if a deficiency is found in the facility.

(3) When the earth-disturbing activity is out of compliance or the Flood Control Measure is violated, the following procedure herein below shall be followed:

(a) the Agency shall appropriately notify the designated contact person for the site on the violation ;

(b) the Agency shall re-inspect the site for compliance twenty-one (21) days following the inspection during which the violation was noted ;

(c) if the violation still exists the Agency may issue by certified mail, an order to comply which order shall describe the violation and work needed to comply with twenty-one (21) days shall be given whereby the work shall be completed and ready for another inspection ;

(d) on the date specified, the site will be re-inspected for compliance ; and

(e) where the violation still exists, the violator shall be liable to a fine prescribed in Section 26 (3) and (4) of the National Environmental Standards and Regulations Enforcement Agency (Establishment) Act, 2007 to secure compliance with these Regulations.

#### PART IV—OFFENCES AND PENALTIES

19.—(1) Any person who violates any of the provisions of these Regulations commits an offence and shall on conviction be liable to a fine not below One Million naira (₦1,000,000) or to imprisonment for a term not exceeding two years or to both such fine and imprisonment and an additional fine of ten thousand naira (₦10,000) for everyday the offence subsists.

Offences  
and  
Penalties.

(2) Any corporate body that violates any of the provisions of these Regulations, shall on conviction, be liable to a fine not below Five Million Naira (₦5,000,000) and an additional fine of fifty thousand naira (₦50,000) for everyday the offence subsists.

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

#### PART V—INTERPRETATION

20.—(1) For the purpose of these regulations, certain terms, words and phrases shall only have the meanings interpreted here in after :

Interpreta-  
tions.

(a) Words used in the present tense include the future tense and the singular include the plural, unless the context clearly indicates the contrary ;

(b) The term “shall” is always mandatory and is not discretionary. The word “may” is permissive. The term “should” is permissive but indicates strong suggestion ; and

(c) The word or term not interpreted or defined by this Part shall be construed according to the rules of grammar and common usage, so as to give these rules their most reasonable application.

(2). In these Regulations :

“Agency” means National Environmental Standards and Regulations Enforcement Agency (NESREA) ;

“Base Flood” means flood having a one hundred chance of being equalled or exceeded in any given year.

“Best Management Practices (BMP’s)” means a collection of structural measures and vegetative practices, which, when properly designed, installed and maintained, will provide effective erosion and sedimentation control for all rainfall events up to and including a 25-year, 24-hour rainfall event.

“Channel” means a natural stream that conveys water. A ditch or channel excavated for the flow of water, e.g. canal.

“Corporate Body” means an artificial entity with perpetual succession and a common seal and may sue and be sued in its corporate name.

“Cut and fill slope” means a portion of land surface or area from which soil material is excavated and/or filled, thus forming a slope or embankment.

“Director-General” means Director General/Chief Executive Officer of NESREA.

“Ditch” means an open channel, either dug or natural, for the purpose of drainage or irrigation, and having intermittent flow.

“Dumping” means Grading, pushing, piling, and throwing, unloading or placing soil.

“Development Area” means any tract, lot or parcel of land which is in one ownership or is contiguous and has many owners, which is being used for non-agricultural, commercial, industrial, residential or institutional construction and is direct target of earth-disturbing activity which will change existing runoff characteristics of the land.

“Earth-disturbing” means any grading, excavating, filling or other alteration of the earth’s surface where natural or man-made ground cover is destroyed and which may result in, or contribute to erosion and sediment pollution.

“Environmental Impact Assessment” means the assessment or evaluation of the potential impacts made on the environment (land, water and air) by different magnitudes of development projects.

“Environmental Impact Statement” means a document that describes the positive and negative environmental effects of a proposed development based on a scientific assessment or study.

“Erosion and Sediment Control” means conservation measures used to control sediment pollution, utilizing and include structural devices, vegetative practices and management techniques.

*"Erosion Control Plan Measures"* means conservation measures worked out in advance and used to control erosion which may include structural devices, vegetative practices and good management techniques.

*"Final Stabilisation"* means all soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of at least 80% cover for the area has been established, or equivalent stabilisation measures, such as the use of mulches, geotextiles, have been employed.

*"Flood"* means a large volume of run-off water in places that are hitherto dry or usually contains much less flowing water; it is an abnormally large quantity of water which cannot be contained within the existing channels.

*"Flood Boundary"* means demarcations in an official map that show or identify areas liable to flood.

*"Floodway Map"* means an official map of the towns in Nigeria on which the Federal Government has delineated as floodway boundaries.

*"Flood Rate Map"* means an official map of the towns in Nigeria on which the Federal Government has delineated the areas of special flood hazards and the risk premium zones applicable to the town, as well as base flood elevations at selected locations.

*"Floodway"* means channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

*"Grading"* means earth-disturbing activities, such as, excavation, stripping, cutting, filling, stockpiling or any combination thereof.

*"Human Settlement"* means cities, towns, villages, and other concentrations of human populations who inhabit a specific locality or region of the earth's surface. It usually features housing, transportation, and commercial infrastructure, among others.

*"Infrastructure"* means a set or a system of publicly and privately provided facilities and services within a country or region that are prerequisites for socio-economic activities, including power and water supply, public transportation, telecommunications, roads, hospitals, schools, markets, etc.

*"Inspector/Regulator"* means an official responsible for control and supervision of a particular activity or area of public interest.

*"Landslide"* means the rapid mass movement of moisture-saturated soil and rock materials downhill, under the influence of gravity.

*"Lowest Floor"* means the lowest floor of the enclosed area of a building (including basement).



*"Manufactured Home"* means a structure that is transportable in one or more sections, built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes recreational vehicles, park trailers, or travel trailers and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property. When located on a lot, a manufactured home shall be considered to be a residence and subject to all of the regulations prescribed for the zoning district in which it is located.

*"Manufactured Home Park or Subdivision"* means a parcel, or contiguous parcels, of land divided into two or more manufactured home lots for rent or sale.

*"Mobile Home"* means fabricated movable structure made of building materials that can be dismantled.

*"New Construction"* means structures for which the "start of construction or substantial improvement commenced on or after the effective date of this ordinance" (not the revision date).

*"Outfall"* means an area where water flows from a structure such as a conduit, storm sewer, improved channel or drain and the area immediately beyond the structure which is impacted by the velocity of flow in the structure.

*"Person"* means a natural and artificial person.

*"Post-development"* means conditions which exist following the completion of the earth-disturbing activity in terms of topography, vegetation, land use and rate, volume or direction of storm water runoff.

*"Proper Drainage"* means a drainage device which ensures that an installed drainage system functions effectively and optimally.

*"Run off"* means the portion of rainfall, melted snow or irrigation water that flows across the ground surface and is eventually returned to a watercourse, after allowing for percolation and evapotranspiration.

*"Relevant MDAs"* means Federal Ministries, Departments and Agencies.

*"Special Flood Hazard Area"* means an area which contains the land in the flood plain within the town, subject to a one percent or greater change of flood in any given year. An area within the flood plain that is susceptible to 100 years flood.

*"Start of Construction"* means substantial improvements, including the date the building permit was issued, provided the actual state of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring of slabs or footings, installation of piles, construction of

columns, or any work beyond the stage of excavation or placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structures.

*"Structure"* means a walled and roofed building that is principally above ground, a manufactured home, a gas or liquid storage tank, or other man-made facilities or infrastructure.

*"Substantial Damage"* means damage of any origin sustained by a structure whereby the cost of restoring the structure to its original condition before damage would equal or exceed 50 percent of the market value of the structure before the damage occurred.

*"Substantial Improvement"* means any combination of repairs, reconstruction, alteration, or improvements to a structure, the cost of which equals or exceeds 50 percent of the market value of the structure, as determined by the cost approach to value, the quantity survey method, the segregated cost method or the square foot method, either:

(a) before the improvement or repair is started, or

(b) if the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either:

(i) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or

(ii) any alteration of a structure listed on the National Register of Historic Places or a State Inventory of Historic Places.

*"Sediment"* means the soils or other surface materials that can be transported or deposited from its site of origin by the action of wind, water, ice or gravity as a product of erosion (sedimentation).

*"Sediment Basin"* means a barrier or other suitable retention structure built across an area of water flow to intercept runoff water and allow transported sediment to settle and be retained prior to the discharge of water into the relevant water body.

"*Sloughing*" means a slip or downward movement of an extended layer of soil resulting from the undermining action of the water or the earth disturbing activity of construction.

"*Soil Erosion*" means a process by which the land surface is worn away by the action of water and wind, sometimes accelerated by human activities.

"*Soil Stabilisation*" means installation of vegetative and/or structural measures to establish a soil cover in order to reduce soil erosion by storm water run-off, wind, and gravity.

"*Stream*" means a body of water running or flowing on the earth's surface or channel in which such flow occurs. Flow may be seasonal or perennial.

"*Temporary Soil Stabilisation*" means establishment of temporary vegetation, mulching, geotextiles, sod, preservation of existing vegetation and other techniques capable of quickly establishing soil stability over disturbed areas, to enhance soil erosion control between construction operations.

"*Ten (10) Year Frequency Storm*" means storm that is capable of producing rainfall expected to be equalled or exceeded on the average of once in 10 years. It may also be expressed as an exceeding probability with 4 percent chance of being equalled or exceeded in any given year.

"*Watercourse*" means a definite channel with bed and banks within which concentrated water flows either continuously or intermittently.

"*Watershed*" means the total drainage area contributing run-off to a single point.

"*Water Resources*" means all rivers, streams, lakes, ponds, wetlands, watercourses, drainage systems and all other bodies or accumulations of surface water, natural, artificial, that are situated wholly or partly within or border upon this state, or are within its jurisdiction, except those private waters that do not combine or effect a junction with natural surface waters.

Citation.

21. These Regulations may be cited as the National Environmental (Soil Erosion and Flood Control) Regulations, 2011.

## SCHEDULES

## SCHEDULE I

*Regulation 10(7)*

## EROSION CONTROL PLAN APPROVAL

- (a) Building/Site Plan approved by the relevant Authorities.
- (b) Inspection Certificate from State Ministries of Environment and other environmental regulatory agencies.

## SCHEDULE II

*Regulation 10(8)*

## CONDITIONS FOR APPROVAL OF EROSION CONTROL PLAN

- (a) Identify critical Areas vulnerable to erosion, Flood and sedimentation.
- (b) Limit time of exposure.
- (c) Limit of exposed areas.
- (d) Control surface waters.
- (e) Control sedimentations.
- (f) Manage storm water runoff.

## SCHEDULE III

## EROSION AND SEDIMENT PERIMETER CONTROLS

## PERIMETER TO CONTROL AND PROTECT :

- (a) stream corridors ;
- (b) stream crossings ;
- (c) wetlands and site entrances.

## PERIMETER CONTROLS MAY INCLUDE :

- (a) sediment barriers ;
- (b) filters ;
- (c) dykes ;
- (d) sediment basins ; or
- (e) combination of such measures such as trees, shrubs, grasses etc.)

## APPLICATION FORM FOR PERMIT ON EROSION AND FLOOD PLAN DEVELOPMENT

Permitted Use [  ]      Regulated Use [  ]      Special Exception [  ]

## 1. APPLICANT :

Name(s) : .....

Signature : .....

Address : .....

City : .....

State : .....

Local Government Area : .....

Telephone No : [  ] Home : ..... [  ] Work : .....

## 2. PROPERTY OWNER(S) :

Name(s) : .....

Signature : .....

Address : .....

City : .....

State : .....

Local Government Area : .....

Telephone No : [  ] Home : ..... [  ] Work : .....

## 3. DESCRIBE THE SUBJECT PROPERTY :

Address or Location : .....

Assessor's Map No. : .....

Assessor's Lot No(s) : .....

Street of Access: .....

Name of Watercourse or Water Body : .....

Total Area of Lot(s) : .....

## 4. PROJECT DESCRIPTION :

Erosion and Flood Plain use for which the applicant is seeking a permit  
(Check one)

(a) Permitted Use.

(b) Regulated Use.

(c) Special Exception.

Describe the proposed activity and its purpose : .....

Proposed encroachment of Flood fringe area (in hectares) : .....

Proposed encroachment of Erosion prone area (in hectares) : .....

Proposed encroachment of Regulated Floodway (in hectares) : .....

Proposed encroachment of Regulated Erosion prone area (in hectares) : ...

Proposed alteration of Watercourse (in hectares) : .....

Flood proofing techniques proposed : .....

Soil conservation techniques proposed : .....

Disturbance of designated wetland area : [     ] No     [     ] Yes

Permit Number : .....

Date applied for : .....

Disposition : .....

APPLICATION NO. : .....

DATE FILED : .....

APPROVED : .....

DENIED : .....

#### 5. TECHNICAL AND PLANNING DATA :

*Project Specifics* : Provide the following information from official sources or submitted documentation.

All elevations are to be relative to mean sea level.

Existing base flood flow rate.....Source : .....

Existing extent of erosion :.....Source : .....

Existing base flood elevation : ....., Source : .....

Existing extent of the deepness of erosion :.....Source : .....

Lowest floor elevation of existing buildings including garage or basements : .....

Lowest floor elevation of proposed building including garage or basements: .....

Will there be dry access to the structure(s) during the 100 year flood ? .....

Will there be soil stability in the area during the 100 year erosion ? .....

Floodplain Alterations Proposed : .....

Volume of displaced Flood Plain : .....

Volume of mitigated Flood Plain : .....

*Erosion mitigation measure proposed :*

Area covered with the erosion (in square metres).....

Area covered with the measures (in square metres).....

*Floodway Alterations Proposed :*

Length of reconstructed or altered floodway : .....

Proposed base flood flow rate : .....

Proposed base flood elevation : .....

*Shelter Belt :*

Length of the vegetation cover : .....

Proposed area for vegetation/ afforestation : .....

Proposed area to be left uncovered : .....

Tree species : .....

*Woodlots:*

Proposed area for vegetation : .....

Tree species : .....

## 6. AUTHORISATIONS AND CERTIFICATIONS :

(a) I hereby authorize the Enforcement Officer of the National Environmental Standards and Regulations Enforcement Agency to inspect the subject property at reasonable times, both before and after a final decision has been made regarding this application or request.

(b) I hereby certify that I am familiar with the information included in this application and am/are aware that the law provides that any person who commits, takes part in, or assists in any violation of any provision of regulation as contained in the National Environmental (Flood and Erosion Control) Regulation, 2011, shall be assessed a civil penalty of not more than one hundred and fifty thousand naira for each offense. I further certify that I am aware that it is a violation of law to obtain an erosion and flood plain permit or ruling through deception or through inaccurate or misleading information.

(c) I hereby certify that this application shall be considered complete only when all information and documents required by the Agency have been submitted.

## 7. SUBMISSION REQUIREMENTS :

The following shall be included as part of this application :

- filing fee—make cheque payable to “NESREA”
- N600.00 Permitted Use, N5,000.00 for Regulated Use, and N10,000.00 for Special Exception.
- ten copies of a Site Plan showing existing and proposed conditions in relation to the erosion and flood plain, floodway, watercourses, and/or wetlands prepared in accordance with the Regulations.
- any other information as may be required by the Agency.

- Site Plans
- Detail Plans
- Construction Specifications
- Drainage Computations
- Flood Proofing Details
- Flood Proofing Certification
- Erosion control Plans

## FOR OFFICIAL USE ONLY

Application received by : .....

On : .....

Date : .....

Fee Paid ₦ : .....

Amount in word : .....

.....

NESREA Officer (Sign) : .....



## SCHEDULE V

INSTRUCTION SHEET FOR THE EROSION AND FLOOD PLAIN PERMIT  
APPLICATION FOR FLOOD PLAIN DEVELOPMENT

**The Agency Staff is available to assist the applicant in completing the application. The following is a breakdown of how the application should be prepared.**

1. *Applicant*.—Indicate the name, address and telephone number of the person, partnership, corporation or other legal entity in whose name the permit will be issued, if approved. The application must be signed by the applicant or the applicant's authorized representative.

2. *Property Owner*.—Indicate the name, address and telephone number of the person, partnership, corporation or other legal entity which owns the subject property. If there is more than one property owner, provide this information for each additional owner on a separate sheet. The application must be signed by all of the property owners or their authorized representatives. If the property owner is the same as the applicant, indicate "same as applicant".

3. *Description of Property*.—Describe the subject property in sufficient detail to allow the Agency to identify :

(a) the flood plain, erosion prone area, water bodies and watercourses on the property ;

(b) the areas of flood plain, floodway, water bodies or watercourses to be disturbed ; and

(c) the total area of the lot and areas disturbed. If you are submitting a report which provides this information, indicate "see attached report" and submit the report with your application.

*Example : "Property consists of 1 hectare adjacent to Coppermine Brook. The rear (north-western portion) contains approximately 50m<sup>2</sup> of flood plain along the brook varying from 0.3 to 2m<sup>2</sup> feet in depth. Approximately .100m<sup>2</sup> of actual flood plain may be disturbed for a road crossing."*

4. *Description/Purpose of Proposed Activity*.—Erosion and Flood Plain permits are issued in three categories according to the level of disturbance.

(a) Permitted Use: Open space uses shall be permitted in the erosion and flood fringe area, excluding the floodway, provided that they do not require structures, earth fill, storage of materials or equipment, or the use of utilities such as gas, electric, water or sewer.

*Examples* : agricultural uses, parking of three or fewer vehicles, recreational uses, lawns, gardens.

(b) *Regulated Use*: New development or substantial improvement shall be permitted within areas of special flood hazard, excluding the regulated floodway, if they comply with the standard of this regulation.

(c) *Special Exception*: New development or substantial improvement may be permitted as a special exception in the regulated floodway and shall conform to the provisions of the regulation.

Indicate the nature of and reason for the proposed activity, e.g., "filling of a flood plain to construct a single-family house" or "installation of a culvert in a watercourse for a subdivision road crossing." Additional information may be required to determine the extent and limits of the disturbance. This information can be obtained from the plans to be filed with the application.

Often a wetlands permit is required for disturbance of a City designated wetlands area when working in a flood hazard area.

5. *Technical and Planning Data*.—The information requested is to assist the Agency in making a decision on your permit. The information can be obtained with staff assistance or by the engineering firm preparing your plan. Floor elevations are required to be on the plan.

6. *Authorizations and Certifications*.—Please read the authorizations and certifications carefully, as they affect your rights and impose certain obligations upon you. If you do not understand any of them, do not sign the application until they have been explained to you.

7. *Submission Requirements*.—The Agency's application fee schedule is indicated on the application form :  
Additional information may be required for the application as determined by the staff if necessary in order to determine the limits and extents of construction. Plans will require proposed and existing contours and structures, all lowest floor levels, flood plain and floodway limits and other information as necessary to make a determination.

8. *Description* : The review process will begin when the application form is complete and all documentation submitted. The completed application and documentation will then be submitted to the Technical staff for review and processing. Decisions by the Technical staff will take one of the following forms :

(1) *Permitted use*: approved or denied ;

(2) *Regulated Use*: approved, denied or referred to the National Environmental Standards and Regulations Enforcement Agency ; or

(3) Special Exceptions: referred to the National Environmental Standards and Regulations Enforcement Agency. The Agency meets with the Ministries, Agencies and Parastatals with the same requirements.

## SCHEDULE VI

### GUIDING QUESTIONNAIRE FOR APPLICATION

#### IS YOUR PROPOSAL A SIGNIFICANT ACTIVITY ?

If you are applying for a wetlands permit, the Agency will first determine whether or not your proposal constitutes a "significant activity." This is important because significant activities require a public hearing and the submission of more supporting documentation than does an activity determined to be non-significant. Be sure to attach all information necessary to allow the Agency to determine if your proposal will be treated as a significant or a non-significant activity.

To assist the Agency in making this determination, you should be prepared at the first meeting at which your application is received to answer the following questions and to explain the facts upon which your answers are based :

(a) Will the proposed activity involve the deposit or removal of material in or near a regulated area ?

(b) Will the proposed activity change the natural channel or inhibit the natural dynamics of a watercourse system ?

(c) Will the proposed activity cause any decrease in the natural capacity of a wetlands or watercourse to : support desirable fisheries, wildlife, or other biological life ; prevent Flood ; supply water; assimilate waste; facilitate drainage; or provide recreation or open space ?

(d) Will the proposed activity cause turbidity, siltation or sedimentation in a wetlands or watercourse ?

(e) Will the proposed activity diminish the flow of a natural watercourse or the groundwater levels of the regulated area ?

(f) Will the proposed activity cause or have the potential of causing pollution of groundwater, a wetlands or watercourse ?

(g) Will the proposed activity create conditions that may adversely affect the health, welfare and safety of any individual or the community ?

(h) Will the proposed activity destroy a wetlands or watercourse ?

(i) Will the proposed activity have a major effect or substantial impact on the area for which this application has been filed or on another part of a wetlands or watercourse ?

IF YOUR PROPOSAL IS DETERMINED TO BE A SIGNIFICANT ACTIVITY

If your proposal is determined to be a significant activity, you will be required to submit ;

- (a) the additional information listed in the Regulations, and
- (b) a description of the alternatives which you considered to your proposed activity. (Under the Regulations, the Agency will not issue a wetlands permit unless it finds that a feasible and prudent alternative to the proposed activity does not exist).

ACTIVITIES REQUIRING THE APPROVAL OF OTHER AGENCIES

For certain proposed activities, the Agency's jurisdiction is coincident with that of other agencies. If your proposal involves one or more of the following, you must obtain the approval of the appropriate Federal or State agency :

- (a) construction or modification of a dam,
- (b) construction or placement of an obstruction within a stream channel encroachment line,
- (c) diversion of water in excess of 50,000 gallons of water per day or any other diversion where the tributary watershed area above the point of diversion is 40 hectares or more,
- (d) discharge into the waters of the state or,
- (e) discharge of fill or dredged materials into wetlands.

SCHEDULE VII

PERMIT TO CARRY OUT ACTIVITIES IN EROSION AND FLOOD PRONE AREA

(DEVELOPMENT PERMIT)

Permit No : .....

Name : .....

Address : .....

Having Satisfied all the requirements on the application form and with other relevant permits, you are hereby permitted to carry out .....

Activities on this..... (in metres or hectares) of land.

Located at : .....

This permit is granted valid from (date).....to  
.....and subjected to the following conditions :

- (i).....
- (ii).....
- (iii).....
- (iv).....

Date .....

Signature .....

DATED at Abuja this ..... Day of .....2011

MR JOHN ODEY  
*Honourable Minister,*  
*Federal Ministry of Environment*