

UNOFFICIAL

TITLE 785. OKLAHOMA WATER RESOURCES BOARD
CHAPTER 55. DEVELOPMENT ON STATE OWNED OR OPERATED PROPERTY WITHIN
FLOODPLAINS AND FLOODPLAIN ADMINISTRATOR ACCREDITATION

Introduction:

This document contains amendments to Chapter 55 adopted by the Oklahoma Water Resources Board that became effective May 27, 2008. Also, this document was prepared by Oklahoma Water Resources Board staff as a convenience to the reader, and is not a copy of the official Title 785 of the Oklahoma Administrative Code. State law requires that the Secretary of State's office provide permission to copy the official Code. The rules in the official Oklahoma Administrative Code control if there are any discrepancies between the Code and this document.

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[Authority: 82 O.S., Section 1085.2 and 1601 et seq.]

SUBCHAPTER 1. GENERAL
PROVISIONS

Section

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785:55-1-1. Authority and purpose

(a) **Authority.** These rules have been promulgated and adopted pursuant to and as authorized by 82 O.S. 1981, §§1601 et seq., as amended.

(b) **Purpose of rules.** The purpose of these rules and regulations is to set forth the minimum criteria for development of state owned or state operated property within floodplains and to comply with the requirements necessary to establish eligibility and maintain participation in the National Flood Insurance Program, as set forth in the Federal Emergency Management Agency regulations at 44 C.F.R., Part 60. These criteria and requirements are to:

- (1) Protect human life and health;

- (2) Minimize expenditure of public money for costly flood control projects;
 (3) Minimize the need for rescue and relief efforts associated with flooding and generally under taken at the expense of the general public;
 (4) Minimize prolonged business interruptions;
 (5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
 (6) Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood losses;
 (7) Insure that potential buyers are notified that property is in a flood area; and
 (8) Allow for the procurement of flood insurance.

(c) **Coordination role of Board.** The Board acts as state coordinator of the National Flood Insurance Program (NFIP) for the

Federal Emergency Management Agency (FEMA), and in that role provides guidance and information to local communities' floodplain boards about the NFIP and FEMA regulations promulgated thereunder. The Board also disseminates copies of floodplain maps which show the 100-year floodplain, upon payment of fees as set forth in Chapter 5 of this Title.

[**Source:** Amended at 10 Ok Reg 3369, eff 6-25-93; amended at 14 Ok Reg 2808, eff 7-1-97]

785:55-1-2. Definitions

The following words and terms, when used in this Chapter, shall have the following meaning, unless the context clearly indicates otherwise:

"Base flood" means the flood having a one percent chance of being equaled or exceeded in any given year, also known as the regulatory flood.

"Base flood elevation" means the elevation above mean sea level for the base flood.

"Basement" means any area of the building having its floor subgrade (below ground level) on all sides.

"Base flood discharge" means the peak volume of water passing through a cross-section of a watercourse expressed in cubic feet per second.

"Board" means the Oklahoma Water Resources Board or any employee or agent or staff member thereof.

"Certificate" means a letter or statement signed and sealed by a Registered Professional Engineer stating that certain condition or requirements have been met.

"CFR" means Code of Federal Regulations.

"Development" means any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

"Development permit" means specific written authorization from the Board to allow development within a floodplain in accordance with the applicable regulations governing development within floodplains.

" Dwelling unit " means a place of residence which may be a single residence or a multiple-residence building [82:1603(3)] and includes mobile homes.

"Elevation (MSL)" means elevation in feet in relation to mean sea level.

"Existing structures" means structures constructed prior to May 13, 1980.

"Existing manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.

"Expansion to an existing manufactured home park or subdivision" means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

"Farm building" means a walled and roofed structure which is not intended for human habitation or commercial use but which may be used for agricultural purposes including but not limited to the storage of crops, farm machinery, or livestock.

"Farm pond" means a reservoir impounding less than 50 acre-feet of water with a dam less than 25 feet in height and a drainage area less than one square mile used for stock water and domestic use.

"FEMA" means Federal Emergency Management Agency.

"Flood" means general and temporary conditions of partial or complete inundation of normally dry land areas from the overflow of

lakes, streams, rivers or any other inland waters [82:1603(4)] or watercourses.

"Flooding" means "flood".

"Floodplain" means *the land adjacent to a body of water which has been or may be covered by flooding, including, but not limited to, the one-hundred year flood. [82:1603(5)]*

"Floodway" means *the channel of a stream, watercourse or body of water and those portions of floodplains which are reasonably required to carry and discharge the floodwater or floodflow of any river or stream. [82:1603(8)]*

"Flood boundary floodway map" means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the regulatory floodway have been identified.

"Flood carrying capacity" means the ability of a stream or water course to pass the base flood.

"Flood hazard boundary map (FHBM)" means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the flood area having special hazards have been designated as flood zones.

"Flood insurance rate map (FIRM)" means an official map of a community, on which the Federal Emergency Management Agency has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

"Flood insurance study" means an official report provided by FEMA to communities regarding flood profiles, water surface elevations of the base flood, as well as the Flood Boundary-Floodway Map.

"Floodplain management" means the operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

"Flood proofing" means any combination of structural and non-structural additions, changes, or adjustments to

structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

"Functionally dependent use" means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

"Highest adjacent grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

"Historic structure" means any structure that is:

- (A) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- (B) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (C) Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
- (D) Individually listed on local inventory of historic places in communities with historic preservation programs that have been certified either:
 - (i) By an approved state program as determined by the Secretary of the Interior or;
 - (ii) Directly by the Secretary of the Interior in states without approved programs.

"Levee" means a man-made structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.

"Lowest floor" means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor; provided that such enclosure is not built so as to render the structure in violation of the applicable nonelevation design requirements of 44 CFR Section 60.3, FEMA regulations.

"Manufactured home" means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle".

"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.

"Mean sea level" means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

"Natural drainage" means the drainage basin without man-made alterations.

"New construction" means for floodplain management purposes, structures for which the "start of construction" commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

"New manufactured home park or subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the

manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.

"Non-residential structure" means a building not used for one or more families.

"One hundred year flood" means the base flood.

"Permit", for purposes of Chapter 55 means specific written authorization by the Board and consists of the following:

(A) Building permits which are issued for the construction or substantial improvement of a structure.

(B) Construction permits which are issued for any man-made alteration, construction or development which may have an adverse effect on the regulatory floodplain.

"Program" means the overall National Flood Insurance Program authorized by the National Flood Insurance Act of 1968 (42 U.S.C. 4001-4128) as amended [82:1603(10)], and the Oklahoma Floodplain Management Act (82 O.S. 1981, §§1601 through 1619).

"Recreational vehicle" means a vehicle which is:

(A) Built on a single chassis;

(B) 400 square feet or less when measured at the largest horizontal projections;

(C) Designed to be self-propelled or permanently towable by a light duty truck; and

(D) Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

"Regulatory flood" means the one-hundred-year flood, i.e., the flood having a one percent (1%) chance of occurrence in any given one year period, also known as the base flood.

"Regulatory flood fringe" means the

area of the regulatory floodplain which may be developed by equal encroachment to the extent that the regulatory floodway is preserved and natural conditions allowed.

"Regulatory floodplain" means the area susceptible to being covered by the regulatory flood.

"Regulatory floodway" means the 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 a designated height.

"Riverine" means relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

"Start of construction" means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date, unless the Board extends such time period for good cause shown. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the 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, footing, piers, or foundations of 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 structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

"State floodplain board" means the Oklahoma Water Resources Board whose members also serve as members of the State

Floodplain Board

"State owned property" means real property owned or leased in whole or in part or operated by any agency of the State of Oklahoma, and includes but is not limited to lands held in trust by the Commissioners of Land Office. It shall be presumed that development or substantial improvement on rights of way, licenses, easements, or other interests less than fee simple shall be considered to be development or substantial improvement on state owned property.

"Structure" means any walled and roofed edifice or building including but not limited to manufactured homes and gas or liquid storage tanks.

"Substantial improvement" means reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage," regardless of the actual repair work performed. The term does not, however, include either:

(A) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions or

(B) Any alteration of a "historic structure," provided that the alteration will not preclude the structure's continued designation as a "historic structure."

"Variance" means a grant of relief to a person from the requirement of these rules. A variance, therefore, permits construction or development in a manner otherwise prohibited by these rules.

"Watercourse" means the channel or area that conveys a flow of water.

"Water surface elevation" means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, (or other

datum, where specified) of floods of various magnitudes and frequencies in the floodplains of riverine areas.

[**Source:** Amended at 10 Ok Reg 3369, eff 6-25-93; Amended at 11 Ok Reg 3023, eff 6-13-94; Amended at 14 Ok Reg 2808, eff 7-1-97]

785:55-1-3. Administrative provisions

(a) General prohibition assumption and methods of development. A general prohibition assumption and methods of development are as follows:

(i) In making determinations hereunder, the Board shall, to the extent possible, prohibit damaging or potentially damaging increases in flood elevation or velocity caused by alterations in or encroachments upon the regulatory floodplain of state owned or operated property.

(2) All calculations of damaging or potentially damaging increases in flood elevation or velocity shall assume a reasonably equal degree of encroachment of existing and potential uses in the floodplain and shall take into account the cumulative impact of such encroachment.

(3) The Board shall consider acceptable methods of developing floodplain areas, including but not limited to the following to prevent significantly increased flood elevations and velocities and to minimize damages to floodplain uses:

(A) Location of structures, landfills or other development outside of the regulatory floodplain, thus preserving the floodplain for uses which have no significant effect on the storage and conveyance of floodwaters.

(B) Location of limited development in the floodplain in accordance with Subchapters 3 and 5 of this Chapter so that development will be in itself safe from flood damage and will preserve the base flood elevation.

(b) Rules as minimum criteria. The provisions of these rules shall be construed to

be minimum requirements to decrease and eliminate human-induced changes to the floodplain which may increase flooding. Natural and human-induced conditions may still cause floods to occur within and outside the floodplain in any event. The degree of flood protection required herein is based on engineering and scientific methods reflecting the current state of the art.

(c) Administration. The Board, acting in its official capacity and/or by and through its Executive Director and Board staff, shall administer and enforce these rules.

(d) Liabilities not imposed on Board. The rules of this Chapter shall not be deemed nor construed to create any liability on the part of the Board or any officer or employee thereof for any flood damages which might be alleged or claimed to have occurred or sustained as a result of reliance on these rules or any administrative decision lawfully made thereunder.

(e) Prior use. Any state owned or operated buildings or uses within a regulatory floodplain that existed prior to May 13, 1980, which do not meet the minimum standards set forth herein may continue. However, unless brought into compliance with the minimum standards set forth herein, such prior uses may not be substantially improved, altered or enlarged. **(f) Use of maps prepared by FEMA.** The Board will utilize FHBMs, FBFMs, and FIRMs where appropriate in the administration of these rules.

(g) Field surveys. All required field surveys shall be conducted under the supervision of a Registered Professional Engineer or Registered Land Surveyor and shall be so certified.

(h) Open records. The Board shall maintain and hold open for public inspection all records submitted in accordance with this Chapter of these rules.

[**Source:** Amended at 14 Ok Reg 2808, eff 7-1-97]

785:55-1-4. Permits

(a) Development permits required. A

development permit shall be required for all proposed development or substantial improvement located on state owned or operated property within the regulatory floodplain identified by the Board.

(1) Permits will be required for any proposed development or substantial improvement including the placement of manufactured homes within the regulatory floodplain.

(2) Development permits will be issued after the Board determines that the proposed development in the regulatory floodplain is not a danger to persons or property. The Board shall give notice of proposed development permit applications to counties and municipalities participating in the National Flood Insurance Program at least thirty (30) days before granting the permit to undertake such development.

(b) **Permit forms.** Permit application forms provided by the Board shall be used in applying for a permit. The application shall be submitted in duplicate and shall provide sufficient information to determine the effect of the proposed development on the conveyance of floodwaters. If the Board deems necessary and so notifies the applicant in writing, one or more sets of plans and specifications may be required. The Board may enter into Memorandums of Agreement with applicants in accordance with this Chapter.

(c) **Board action.** The requirements imposed by these rules shall govern the Board in making development permit approval decisions. The Board shall exercise such discretion in its application of these rules as may be necessary to produce reasonable decisions based upon examination by and recommendation of the Board's staff.

(d) **Permit conditions.** When necessary to accomplish the purposes of these rules, special conditions may be included in the permit. Such conditions may include but are not limited to as-built certifications, maintenance guarantees, floodproofing

requirements, fill, dike or levee requirements, control of the design and location of structures and other specifications related to the accomplishment of the purposes of this Chapter of these rules. When as-built certification is included as a special condition, the required key elevations or critical dimensions will be specifically identified. One or more sets of plans and specifications prepared by a Registered Professional Engineer may also be required under a special condition.

(e) **Bridges and roads.** All applications for development permits for bridges and roads shall include a certification signed and sealed by a Registered Professional Engineer that all applicable requirements of these rules have been met.

(f) **Riverine development.** In riverine situations, the Board shall notify adjacent communities at least thirty (30) days prior to granting a permit which would result in the alteration or relocation of a watercourse and submit copies of such notifications to the Federal Emergency Management Agency.

[Source: Amended at 10 Ok Reg 3369, eff 6-25-93; Amended at 11 Ok Reg 3023, 6-13-94]

SUBCHAPTER 3. DEVELOPMENT

Section

- 785:55-3-1. Development without base flood elevations determined or regulatory floodways delineated
- 785:55-3-2. Development in the regulatory floodplain with base flood elevations determined
- 785:55-3-3. Development in delineated regulatory floodways
- 785:55-3-4. General requirements for development in any regulatory floodway

785:55-3-1. Development without base flood elevations determined or regulatory floodways delineated

(a) **Applicability of section.** If a proposed development site is in a regulatory floodplain where no base flood elevations have been

determined and no regulatory floodways have been delineated, the criteria and requirements of this section shall apply. Also, in such cases, all proposed development and substantial improvements shall:

- (1) Be designed (or modified) and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;
- (2) Be constructed with material resistant to flood damage;
- (3) Be constructed by methods and practices that minimize flood damages; and
- (4) Be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating with the components during conditions of flooding.

(b) **Other permits.** The applicant for a proposed development permit shall assure that all necessary permits have been obtained for which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334, as amended.

(c) **Subdivision development in regulatory floodplains.** Subdivision proposals and other proposed new development, including manufactured home parks, shall meet the requirements of these rules. If a subdivision proposal or other proposed new development is in a regulatory floodplain, any such proposals shall be reviewed to assure that:

- (1) All such proposals are consistent with the need to minimize flood damage within the regulatory floodplain;
- (2) All public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and
- (3) Adequate drainage is provided to reduce exposure to flood hazards.

(d) **Water systems in regulatory floodplains.** New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems.

(e) **Sanitary sewers within regulatory floodplains.** Sanitary sewers within regulatory floodplains shall be subject to the following:

- (1) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters; and
- (2) Onsite waste disposal systems shall be located to avoid impairment to the system or contamination from the systems during flooding.

(f) **Development prior to delineation of regulatory floodway.** Until a regulatory floodway is delineated, no new construction, substantial improvements, or other development (including fill) shall be permitted within a regulatory floodplain, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community.

(g) **Base flood elevation data.** All new subdivision proposals and other proposed developments (including proposals for manufactured home parks) greater than 50 lots or 5 acres, whichever is the lesser, shall include within such proposals base flood elevation data.

[Source: Amended at 10 Ok Reg 3369, eff 6-25-93]

785:55-3-2. Development in the regulatory floodplain with base flood elevations determined

(a) **Applicability of section.** In addition to the criteria and requirements set forth in 785:55-3-1 and 785:55-3-4 herein, all developments within the regulatory floodplain where base flood elevations have been

determined shall comply with the criteria and requirements of this section.

(b) **Use of base flood elevations.** The Board shall obtain, review and utilize any base flood elevation and floodway data available from a federal, state, or other source, including data developed pursuant to 785:55-3-1(g), as criteria for requiring that new construction, substantial improvements, or other development in the regulatory floodplain meets the requirements of these Rules as applicable.

(c) **Floor and floodproof elevations.** The applicant shall obtain and provide the Board with the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures. If the structure has been floodproofed in accordance with (i)(2) and (j) of this section, the applicant shall obtain and provide the Board with the elevation (in relation to mean sea level) to which the structure was floodproofed.

(d) **Flood carrying capacity of altered watercourse.** The Board shall assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

(e) **Manufactured home installation in general.** All manufactured homes which are to be placed within a regulatory floodplain shall be installed using methods and practices which minimize flood damage. For the purposes of this requirement, manufactured homes must be elevated and anchored to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

(f) **Manufactured home with permanent foundations.** Manufactured homes that are placed or substantially improved on sites within a regulatory floodplain shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is

elevated at least one (1) foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement where the manufactured home is located as follows:

- (1) Outside of a manufactured home park or subdivision.
- (2) In a new manufactured home park or subdivision.
- (3) In an expansion to an existing manufactured home park or subdivision; or
- (4) In an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood.

(g) **Manufactured homes without permanent foundations.** Manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivision within regulatory floodplains that are not subject to the provisions of (f) of this section shall be elevated so that either:

- (1) The lowest floor of the manufactured home is at or above the base flood elevation; or
- (2) The manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength, that are no less than 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

(h) **Other residential structures.** All new construction and substantial improvements of residential structures within the regulatory floodplain shall have the lowest floor (including basement) elevated at least one (1) foot above the base flood elevation.

(i) **Non-residential structures.** All new construction and substantial improvements of non-residential structures within regulatory floodplains shall:

- (1) Have the lowest floor (including

basement) elevated at or above the base flood elevation; or

(2) Together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with wall substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

(j) **Non-residential floodproofing.** Where a non-residential structure is intended to be made watertight below the base flood elevation, the following shall apply:

(1) A Registered Professional Engineer or Architect shall develop and/or review structural design, specifications, and plans for the construction, and shall certify that the design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of (i)(2) of this section; and

(2) A record of such certificates which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the Board.

(3) Floodproofing for non-residential structures will be required only when the other aforementioned techniques for flood protection are impossible or impractical. Floodproofing measures shall be designed consistent with the base flood elevation for the particular area, flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, and other factors associated with the regulatory flood. The Board may require that the applicant submit a plan or document certified by a Registered Professional Engineer or Licensed Architect that the floodproofing measures are consistent with the base flood elevation and associated flood factors for the particular area. Floodproofing measures which may be required include

but are not limited to the following:

(A) Construction with materials and utility equipment resistant to flood damage.

(B) Anchorage to resist flotation and lateral movement.

(C) Installation of watertight doors, bulkheads and shutters or similar methods of construction.

(D) Reinforcement of walls to resist water pressures.

(E) Use of paints, caulks, or other substances to reduce seepage of water through walls.

(F) Addition of mass or weight to structures to resist flotation.

(G) Installation of pumps to lower water levels in structures.

(H) Construction of water supply and waste treatment systems so as to prevent the entrance of floodwaters.

(I) Pumping facilities or comparable practices for subsurface drainage systems for buildings, to relieve external foundation wall and basement flood pressures.

(J) Construction to resist rupture or collapse caused by water pressure or floating debris.

(K) Installation of valves or controls on sanitary and storm drains which will permit the drains to be closed to prevent backup of sewage and storm waters into the buildings or structures.

Gravity draining of basements may be eliminated by mechanical devices.

(L) Location of all electrical equipment, circuits, and installed electrical appliances to assure they are above the base flood elevation.

(k) **Enclosed areas below lowest floor.** For all new construction and substantial improvements:

(1) Fully enclosed areas below the lowest floor that are useable solely for parking of vehicles, building access or storage in an area other than a basement and which are subject to flooding shall be

designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters.

(2) Designs for meeting this requirement must either be certified by a Registered Professional Engineer or Architect or meet or exceed the following minimum criteria:

(A) A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.

(B) The bottom of all openings shall be no higher than one foot above grade.

(C) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(l) **Recreational vehicles.** Recreational vehicles placed on sites within regulatory floodplains shall:

(1) Be on the site for fewer than 180 consecutive days.

(2) Be fully licensed and ready for highway use. A recreational vehicle will be considered ready for highway use if it is on its wheels or jacking system, if attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or

(3) Meet the permit requirements of 785:55-1-4 and the elevation and anchoring requirements for "manufactured homes" in (f) of this section.

[Source: Amended at 10 Ok Reg 3369, eff 6-25-93; Amended at 14 Ok Reg 2808, eff 7-1-97]

785:55-3-3. Development in delineated regulatory floodways

(a) **Development where regulatory floodway delineated.** In areas in which a

regulatory floodway has been delineated, the following shall apply to development in such delineated regulatory floodways in addition to those in 785:55-3-1, 785:55-3-2 and 785:55-3-4.

(b) **Regulatory floodway designation.** The Board shall designate regulatory floodways based on the principle that the area chosen for the regulatory floodway must be designed to carry the waters of the base flood, without increasing the water surface elevation of that flood more than one foot at any point.

(c) **Development or encroachments within regulatory floodway.** Encroachments, including fill, new construction, substantial improvements, and other development within the designated regulatory floodway are prohibited unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed encroachment would not result in any increase in flood levels within the community during the occurrence of the base flood discharge.

(d) **Increase in base flood elevations.** Encroachments within the designated regulatory floodway that would result in an increase in the base flood elevation are prohibited unless the applicant first makes application to FEMA and receives a conditional letter of map revision or floodway revision.

(e) **Modifications or additions.** For modification or additions, the following shall apply:

(1) Non-substantial improvements to existing structures which are located in a regulatory floodway or are vulnerable to flood damage may be allowed provided:

(A) The new construction does not increase flood damage potential of the structure and does not obstruct flood flows.

(B) Floodproofing of existing structures is allowed and encouraged, but must comply with these rules.

(2) The Board shall prohibit the repair or

replacement of insured substantially damaged structures which are located in a regulatory floodway delineated by the Board. Destroyed structures may not be rebuilt without a permit issued by the Board in such a regulatory floodway. Where such insured perils are prohibited by regulation, the loss becomes a constructive total loss.

[Source: Amended at 10 Ok Reg 3369, eff 6-25-93; Amended at 14 Ok Reg 2808, eff 7-1-97]

785:55-3-4. General requirements for development in any regulatory floodplain

(a) **Applicability of section.** The provisions of this section shall apply to development within any regulatory floodplain, regardless of whether base flood elevations have been determined or regulatory floodways have been delineated.

(b) **Temporary fills.** Temporary fills, such as cofferdams or fills used during construction, may be used upon assumption of full responsibility by the sponsoring agency.

(c) **Roadways, bridges and public utilities within the regulatory floodplain.** For roadways, bridges and public utilities within the regulatory floodplain, the following shall apply:

(1) When failure or interruption of service of roadways, bridges, or public utilities would endanger public health or safety, such roadways, bridges, or public utilities shall be protected to the base flood elevation or to the elevation of the flood of record, whichever is greater. In other instances where only economic losses are threatened, protection shall be provided to the extent practical. A degree of protection less than the base flood elevation may be justified even in cases where overtopping could occur.

(2) The following provisions shall apply to all applicable construction:

(A) Buried crossings such as pipelines shall be maintained at least

three (3) feet below the channel bottom.

(B) Modification, addition and replacement of existing roadways, bridges and public utilities shall be allowed providing adequate provision is made for the backwater effects of new flow obstructions in accordance with 785:55-3-1, 785:55-3-2, and 785:55-3-3.

(d) **Storage of materials.** Materials that are buoyant, flammable, explosive, or could be injurious to human, animal or plant life shall be stored above the base flood elevation, floodproofed or protected by structural measures consistent with the standards set forth herein. Storage of materials likely to cause water pollution, in the event of flooding, is prohibited unless adequate safeguards are provided.

(e) **Emergency repairs and replacements.** Emergency repairs and replacements which will not threaten public health or safety may be built or constructed without a permit. If the construction would normally require a permit, application for such permit must be made as soon as practical. Construction must be removed if it does not conform to the rules in this Chapter.

(f) **Government projects.** Government projects for flood damage control or other water management purposes otherwise authorized by law shall be allowed under the following conditions:

(1) The project does not increase flood damage potential.

(2) Any increase in flooding above, below or through the project area is mitigated by project design.

(3) Plans, specifications and provisions for securing required land rights have been approved and a development permit issued by the Board; and

(4) A sponsoring agency is authorized and has accepted full responsibility for operations, maintenance and repair of the project.

(g) **Dikes, levees, floodwalls and similar**

structures. For dikes, levees, floodwalls and similar structures, the following shall apply:

(1) Protection afforded by existing dikes, levees, floodwalls and similar structures will be evaluated during delineation of the regulatory floodplain. If the existing levee provides protection to the base flood elevation, to include at least 3 feet of freeboard, the boundary of the regulatory floodplain will be located channelward of the levee. Regulatory floodplains will then be delineated along interior streams, based on their regulatory flood discharge. If the existing levee does not provide protection to the base flood elevation, the regulatory floodplain will be delineated as if the levee does not exist.

(2) Construction of new levees may be allowed as a government project as provided in (f) of this section. Protection must be provided equivalent to that provided by filling to the base flood elevation.

(h) **Reservoir or channel improvements.** The regulatory floodplain shall not be changed on the basis of proposed reservoir or channel improvements. The regulatory floodplain may be changed after the reservoir or channel improvements are constructed and operative. All requests to change the regulatory floodplain boundaries must be submitted through the Board to FEMA for approval.

(i) **Error in delineation of the regulatory floodplain.** The delineation of the regulatory floodplain shall not be changed unless it has been shown that the original delineation is in error or there are changed conditions which modify the original computations. Any person contesting the correctness of the delineation shall be given reasonable opportunity to submit his own technical evidence. Such evidence along with a request to change shall be forwarded to FEMA through the Board for consideration.

(j) **Methods for providing flood protection.** The following are nonexclusive

acceptable methods for providing flood protection:

(1) Permanent fill may be allowed as a means of providing safe construction sites, provided:

(A) The fill, except in exceptional circumstances, is contiguous with the boundary of the regulatory floodplain and shaped, in plan, so as not to create adverse velocities or current patterns.

(B) The surface of the fill is above the regulatory flood elevation.

(C) The channelward face of the fill shall be protected against erosion. If protected by vegetative cover, slopes shall be no steeper than three (3) horizontal to one (1) vertical. Steeper slopes shall be protected by riprap. A vertical bulkhead may be used if adequately founded and protected against scour.

(D) Fill shall be of suitable material and so compacted to provide adequate support under saturated conditions.

(E) Adequate provision is made for conducting drainage across or through the fill.

(2) Elevating on adequately anchored pilings or columns is allowed provided:

(A) The lowest portion of the structural members of the lowest floor (excluding the pilings and columns) is elevated one-foot above the base flood elevation and securely anchored to such piles or columns.

(B) The elevating members are designed to withstand saturated conditions, hydrostatic pressure, and to minimize scouring.

(C) The size, shape, spacing and alignment of elevating members are selected to minimize turbulence and deflection of current patterns, and to facilitate easy passage of debris.

(D) Major access and utility services are elevated at least one (1) foot

above the base flood elevation.

(k) **Channel relocation and modification.** Channel relocation and modification may be allowed provided the upstream and downstream flood potential is not altered.

(l) **New storm cellars.** For new storm cellars, the following shall apply:

(1) New storm cellars may be built below the flood elevation provided that such new storm cellars are:

- (A) Limited to nonhabitable uses,
- (B) Designed so that all electrical, heating and other mechanical equipment is above the regulatory flood protection level.
- (C) Designed so that hydrostatic pressure and uplift forces are unable to dislodge structure from the ground and the integrity of the storm cellar is preserved during the flooding.

(2) Compliance with requirements of (1)(A) through (C) of this subsection must be certified by a Registered Professional Engineer or Licensed Architect.

[**Source:** Amended at 10 Ok Reg 3369, eff 6-25-93; Amended at 14 Ok Reg 2808, eff 7-1-97]

SUBCHAPTER 5. VARIANCES AND EXEMPTIONS ON STATE OWNED OR OPERATED PROPERTY WITHIN THE FLOODPLAINS

Section

785:55-5-1. Variances
785:55-5-2. Exemptions

785:55-5-1. Variances

(a) **State law applicable.** The Board shall hear and render judgment on request for variances from the requirements of these regulations in accordance with Title 82 O.S. 1981, Section 1615.

(b) **Board discretion, hearing, term of variance.** The Board shall exercise wide discretion in weighing the equities involved and the advantages and disadvantages to the applicant and to the public at large when determined whether the variance shall be

granted. The Board shall conduct a hearing which complies with all requirements of the Floodplain Management Act, Title 82 O.S. 1981, Section 1610(B), for public notice. In no case shall variances be effective for a period longer than twenty (20) years.

(c) **Variances for historic structures.** Variances may be granted for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places of the State Inventory of Historic Places.

(d) **Conditions on variances.** Upon consideration of the factors noted above and the intent of these rules, the Board may attach such conditions to the granting of variances as it deems necessary to further the purposes and objectives of this Chapter of the rules.

(e) **Requirements for granting variances.** The following prerequisites for granting variances shall apply:

(1) Variances shall not be granted within any delineated regulatory floodway if any increase in flood levels during the base flood discharge would result. Notification of the denial of the requested variance shall be given to the applicant and shall be maintained with a record of all variance actions as required in 785:55-1-4(f).

(2) Variances for uses which do not satisfy the requirements of the Oklahoma Floodplain Management Act shall only be granted upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief and meets the following criteria:

(A) Showing a good and sufficient cause.

(B) A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public, or conflict with existing local laws, ordinances or regulations.

(3) Any applicant to whom a variance is granted shall be given written notice that the structure will be permitted to be built with the lowest floor elevation below the base flood elevation, and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation, and will result in increased flood insurance premium rates up to amounts as high as \$25.00 for each \$100.00 of coverage. Applicants shall also be notified that construction below the base flood level increases risks to life and property.

(4) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.

(f) **Variances for functionally dependent use.** Variances may be granted for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that:

(1) The criteria outlined in this subsection and subsection (h) are met, and

(2) The structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(g) **Justification for variance in relation to lot size.** Variances may be granted for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the requirements of this Section are met. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.

(h) **Variance prohibited if flood hazard.** No variance shall be granted where the effect of the variance will be to allow the continuance or to establish a condition which unreasonably creates flooding hazards.

(i) **Variances do not relieve liability.** Variances granted shall not be construed as to relieve any person who receives it from any liability imposed by the laws of this state.

[Source: Amended at 10 Ok Reg 3369, eff 6-25-93]

785:55-5-2. Exemptions

(a) **Agricultural uses.** These floodplain management rules in this Chapter shall not apply to usual agricultural purposes, the planting of crops, or the construction of farm ponds, provided that such activities do not pose a threat to public health, safety, and welfare.

(b) **Recreational or open-space use of land.** Any use of land in the regulatory floodplain for recreational or open-space purposes, not otherwise specifically addressed by this Chapter of the rules is exempt provided that such use does not alter the flood carrying capacity or the regulatory floodplain. Such uses may include but are not limited to non-enclosed boat docks, fishing docks and boat houses; floating stores and floating marinas which are walled and roofed; non-enclosed picnic shelters; anchored picnic tables; boat ramps; and unimproved parking lots.

[Source: Amended at 10 Ok Reg 3369, eff 6-25-93; Amended at 14 Ok Reg 2808, eff 7-1-97]

SUBCHAPTER 7. FLOODPLAIN ADMINISTRATOR ACCREDITATION PROGRAM

Section

785:55-7-1. Authority and purpose

785:55-7-2. Subchapter definitions

785:55-7-3. Designation of floodplain administrator

785:55-7-4. Accreditation required

785:55-7-5. Temporary accreditation period; first full accreditation period

785:55-7-6. Vacancies and replacement of floodplain administrators; notice to Board

- 785:55-7-7. Accreditation application
 785:55-7-8. Initial accreditation requirements and standards
 785:55-7-9. Expiration of accreditation and renewal of accreditation
 785:55-7-10. Continuing education requirement
 [Source: Added at Ok Reg _____, eff 7-1-2005]

785:55-7-1. Authority and purpose

(a) **Authority.** These rules are promulgated and adopted pursuant to and as authorized by 82 O.S. Supp. 2004, §1085.2 and 82 O.S. Supp. 2004, §§1603, 1604, 1620 and 1620.1, as amended.

(b) **Purpose.** The purpose of this program is to provide a procedure for accrediting floodplain administrators and to assure that persons responsible for important economic decisions affecting health, safety and welfare of the State receive annual training to assist them in managing development in floodplains.

785:55-7-2. Subchapter definitions

In addition to the definitions in Section 785:55-1-2 of this Chapter, the following words and terms, when used in this subchapter, shall have the following meaning, unless the context clearly indicates otherwise:

"Community" means a town, city, or county, which has created a floodplain board that has adopted floodplain regulations.

"Executive Director" means Executive Director of the Oklahoma Water Resources Board (Board).

"Floodplain administrator" means a person accredited by the Board and designated by a floodplain board, to administer and implement laws and regulations relating to the management of floodplains [82:1603(6)].

"Floodplain regulations" means the codes, ordinances and other written requirements relating to the use of land and construction within the channel and floodplain areas including, but not limited to, zoning ordinances, platting regulations, building

codes, housing codes, setback requirements and open area regulations [82:1603(8)] adopted by a community floodplain board in order to qualify for participation in the National Flood Insurance Program.

"Flood-prone areas" means areas that are subject to, or are exposed to, flooding and flood damage.

785:55-7-3. Designation of floodplain administrator

The floodplain board or proper community official or community governing body, as the case may be, for each community that participates in the National Flood Insurance Program shall designate a person to serve as the floodplain administrator for the community. The floodplain administrator may be part-time, full-time or contracted.

785:55-7-4. Accreditation required

All floodplain administrators must be accredited to act in the capacity of a floodplain administrator.

785:55-7-5. Temporary accreditation period; first full accreditation period [REVOKED]

785:55-7-6. Vacancies and replacement of floodplain administrators; notice to Board

The community's floodplain board or appropriate community official or community governing body shall contact the Board within thirty (30) days after a floodplain administrator position becomes vacant. The floodplain board or appropriate community official shall use its best efforts to designate a successor floodplain administrator within sixty (60) days after a vacancy occurs. The successor must become accredited as described in Sections 785:55-7-7 and 785:55-7-8 within one hundred twenty (120) days after being designated as floodplain administrator.

785:55-7-7. Accreditation application

(a) All persons who are designated as a

floodplain administrator by a community floodplain board, proper community official or community governing body, as the case may be must file an application for accreditation with the Board on a form provided by the Board.

(b) The application and supporting documentation will be reviewed by the Board's staff, Board staff will inform the applicant in writing regarding any deficiencies in the application.

(c) Completed applications will be presented to the Board with a recommendation from Board staff on whether to accredit the floodplain administrator.

(d) Proof of being a Certified Floodplain Manager (CFM[®]) under the Oklahoma Floodplain Managers Association (OFMA) or other association will fulfill the accreditation obligation.

785:55-7-8. Initial accreditation requirements and standards

(a) To obtain initial accreditation, the Board may consider the knowledge, experiences, skills, and training of an applicant in floodplain management and in minimization and prevention of flood hazards.

(b) Knowledge, experiences, skills, and training of an applicant in floodplain management and in minimization and prevention of flood hazards can be shown through documentation demonstrating one of the following:

- (1) completion of a continuing education training approved by the Board;
- (2) evidence of at least two (2) years of sufficient experience in floodplain management;
- (3) proof of current standing as a CFM[®] in the certification program of OFMA or other association; or
- (4) successful passage of an examination given by the Board.

785:55-7-9. Expiration of accreditation and renewal of accreditation

(a) All accreditations expire on June 30 of

each year.

(b) Accreditation must be renewed each year. On or before July 1 of each year, each accredited floodplain administrator shall submit the following:

- (1) renewal application on a form provided by the Board;
- (2) documentation, such as an attendance certificate, showing completion of required continuing education unless otherwise determined by the Executive Director.

(c) An application for renewal submitted after June 30 will be considered an application for new accreditation.

785:55-7-10. Continuing education requirement

(a) Between July 1 and June 30 of each year, floodplain administrators shall attend at least six (6) hours of approved continuing education relating to floodplain management.

(b) Continuing education training provided by the Federal Emergency Management Agency, the Board, OFMA and the Association of State Floodplain Managers is presumptively approved. The Board must specifically approve continuing education training provided by others.

(c) Floodplain administrators may request pre-approval of continuing education training provided by others. Information concerning the continuing education training provided by others must be submitted to the Board for review and approval.

(d) Floodplain administrators may earn six (6) hours of approved continuing education by successfully completing the Board's Floodplain Management 101 Study Course.