



Ohio Administrative Code

Rule 1501:22-1-04 Floodplain management criteria.

Effective: July 26, 1990

(A) When a county or municipal corporation has been notified, pursuant to the requirements of the national flood insurance program, that it contains areas of special flood hazards (A zones) by the publication of a FHBM or FIRM, but where such maps neither identify a floodway or coastal high hazard area, nor contain water surface elevation data, the county or municipal corporation shall:

(1) Require permits for all proposed construction and other developments including the placement of manufactured homes, within Zone A on the FHBM or FIRM;

(2) Review proposed development to assure that all necessary permits have been received from those governmental agencies from 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;

(3) Review all permit applications to determine whether proposed building sites will be reasonably safe from flooding. If a proposed building site is in an area of special flood hazard, all new construction and substantial improvements shall (a) 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, (b) be constructed with materials resistant to flood damage, (c) be constructed by methods and practices that minimize flood damages, and (d) 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 within the components during conditions of flooding.

(4) Review subdivision proposals and other proposed new development, including manufactured home parks or subdivisions, to determine whether such proposals will be reasonably safe from flooding. If a subdivision proposal or other proposed new development is in an area of special flood hazard, any such proposals shall be reviewed to assure that (a) all such proposals are consistent with the need to minimize flood damage within the flood-prone area, (b) all public utilities and facilities, such as sewer, gas, electrical, and water systems are located and constructed to minimize or



eliminate flood damage, and (c) adequate drainage is provided to reduce exposure to flood hazards;

(5) Require within areas of special flood hazard new and replacement water supply systems to be designed to minimize or eliminate infiltration of flood waters into the systems; and

(6) Require within areas of special flood hazard (a) new and replacement sanitary sewage systems to be designed to minimize or eliminate infiltration of flood waters into the systems and discharges from the systems into flood waters and (b) onsite waste disposal systems to be located to avoid impairment to them or contamination from them during flooding.

(7) Require that all new subdivision proposals and other proposed developments (including proposals for manufactured home parks and subdivisions) greater than fifty lots or five acres, whichever is the lesser, include within such proposals base flood elevation data;

(8) Obtain, review and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, including data developed pursuant to paragraph (A)(7) of this rule, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the FHBM or FIRM meet the standards in paragraphs (B)(2), (B)(3), (B)(5), (B)(6), (B)(12), (B)(14), (C)(2) and (C)(3) of this rule;

(9) Where base flood elevation data are utilized, within Zone A on the FHBM or FIRM:

(a) Obtain the elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures, and

(b) Obtain, if the structure has been floodproofed in accordance with paragraph (B)(3)(b) of this rule, the elevation in relation to mean sea level to which the structure was floodproofed, and

(c) Maintain a record of all such information with the official designated by the county or municipal corporation to administer the issuance of floodplain development permits.

(10) Notify, in riverine situations, adjacent counties and municipal corporations prior to any alteration or relocation of a watercourse, and submit copies of such notifications to the chief of the



division of water in the department of natural resources.

(11) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained;

(12) Require that all manufactured homes to be placed within Zone A on the FHBM or FIRM 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. Method 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.

(B) When, pursuant to the requirements of the national flood insurance program, a county or municipal corporation has been provided a notice of final flood elevations for one or more special flood hazard areas on the FIRM and, if appropriate, other special flood hazard areas have been designated without base flood elevations on the FIRM, but a regulatory floodway or coastal high hazard area has not been identified, the county or municipal corporation shall:

(1) Require the standards of paragraph (A) of this rule within all A1-30 zones, AE zones, A zones, AH zones, and AO zones, on the FIRM:

(2) Require that all new construction and substantial improvements of residential structures within Zones A1-30, AE and AH zones on the FIRM have the lowest floor, including basement, elevated to or above the base flood level.

(3) Require that all new construction and substantial improvements of non-residential structures within Zones A1-30, AE and AH zones on the FIRM (a) have the lowest floor, including basement, elevated to or above the base flood level or, (b) together with attendant utility and sanitary facilities, be designed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy;

(4) Provide that where a non-residential structure is intended to be made watertight below the base



flood level, (a) 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 paragraph (B)(3)(b) or (B)(8)(b) of this rule, and (b) a record of such certificates which includes the specific elevation, in relation to mean sea level, to which such structures are flood-proofed shall be maintained for public inspection with the official designated by the county or municipal corporation.

(5) Require, for all new construction and substantial improvements, that fully enclosed areas below the lowest floor that are usable 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. 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 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. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(6) Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE on the FIRM on sites (a) outside of manufactured home park or subdivision (b) in a new manufactured home park or subdivision, (c) in an expansion to an existing manufactured home park or subdivision, or (d) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation collapse and lateral movement.

(7) Require within any AO zone on the FIRM that all new construction and substantial improvements of residential structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM (at least two feet if no depth number is specified);



(8) Require within any AO zone on the FIRM that all new construction and substantial improvements of nonresidential structures (a) have the lowest floor, including basement, elevated above the highest adjacent grade at least as high as the depth number specified in feet on the FIRM-- at least two feet if no depth number is specified, or (b) together with attendant utility and sanitary facilities be completely floodproofed to that level to meet the floodproofing standard specified in paragraph (B)(3)(b) of this rule;

(9) Require within any A99 zones on a FIRM the standards of paragraphs (A)(1) to (A)(4)(a) and (A)(9) to (A)(12) of this rule;

(10) Require until a regulatory floodway is designated, that no new construction, substantial improvements, or other development, including fill, shall be permitted within Zones A1-30 and AE on the FIRM, 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 county or municipal corporation.

(11) Require within Zones AH and AO, adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

(12) Require that manufactured homes to be placed or substantially improved on sites in an existing manufactured home park or subdivisions within zones A1-30 AH, and AE on the FIRM that are not subject to the provisions of paragraph (B)(6) of this rule be elevated so that either (a) the lowest floor of the manufactured home is at or above the base flood elevation, or (b) the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength that are no less than thirty-six inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(13) Notwithstanding any other provisions of this rule, a county or municipality may approve certain development in Zones A1-30, AE and AH, on the FIRM which increase the water surface elevation of the base flood by more than one foot, provided that the county or municipality first applies for approval from the chief of the division of water in the department of natural resources.



(14) Require that recreational vehicles placed on sites within Zones A1-30, AH, and AE on the FIRM either (a) be on the site for fewer than one hundred eighty consecutive days, (b) be fully licensed and ready for highway use, or (c) meet the permit requirements of (A)(1) of this rule and the elevation and anchoring requirements for "manufactured homes" in paragraph (B)(6) of this rule. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

(C) When, pursuant to the requirements of the National Flood Insurance Program, a county or municipal corporation has been provided a notice of final base flood elevations within Zones A1-30 and/or AE on the FIRM and, if appropriate, AO zones, AH zones, A99 zones, and A zones have been designated on the firm, and has been provided data from which the county or municipal corporation shall designate its regulatory floodway, the county or municipal corporation shall:

(1) Meet the requirements of paragraph (B)(1) to (B)(14) of this rule;

(2) Select and adopt a regulatory floodway 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 any point;

(3) Prohibit encroachments, including fill, new construction, substantial improvements, and other development within the adopted regulatory floodway 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 county or municipal corporation during the occurrence of the base flood discharge;

(D) When, pursuant to the requirements of the national flood insurance program, a county or municipal corporation has been provided a notice of final base flood elevations within Zones A1-30 and/or AE on the FIRM and, if appropriate, AH zones, AO zones, A99 zones, and A zones have been designated on the FIRM, and where on the FIRM coastal high hazard areas have been designated as Zones V1-30, VE, and/or V, the county or municipal corporation shall:

(1) Meet the requirements of paragraphs (B)(1) to (B)(14) of this rule;



(2) Within Zones V1-30, VE, and V on a FIRM. (a) Obtain the elevation in relation to mean sea level, of the bottom of the lowest structural member of the lowest floor, excluding pilings and columns, of all new and substantially improved structures, and whether or not such structures contain a basement, and (b) maintain a record of all such information with the official designated by the county or municipal corporation.

(3) Provide that all new construction and substantial improvements in Zones V1-30 and VE, and also Zone V, if base flood elevation data are available, on the FIRM, are elevated on pilings and columns so that (a) the bottom of the lowest horizontal structural member of the lowest floor, excluding the pilings or columns, is elevated to or above the base flood level; and (b) the pile or column foundation and structure attached thereto is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state or local building standards. A registered professional engineer or architect shall develop or review the structural design, specifications and plans for the construction, and shall certify that the design and methods of construction to be used are in accordance with accepted standards of practice for meeting the provisions of this paragraph.

(4) Provide that all new construction and substantial improvements within Zones V1-30, VE, and V on the FIRM have the space below the lowest floor either free of obstruction or constructed with non-supporting breakaway walls, open wood lattice-work, or insect screening intended to collapse under wind and water loads without causing collapse, displacement, or other structural damage to the elevated portion of the building or supporting foundation system. For the purposes of this paragraph, a breakaway wall shall have a design safe loading resistance of not less than ten and no more than twenty pounds per square foot. Use of breakaway walls which exceed a design safe loading resistance of twenty pounds per square foot, either by design or when so required by local or state codes, may be permitted only if a registered professional engineer or architect certifies that the designs proposed meet the following conditions:

(a) Breakaway wall collapse shall result from a water load less than that which would occur during the base flood; and,



(b) The elevated portion of the building and supporting foundation system shall not be subject to collapse, displacement, or other structural damage due to the effects of wind and water loads acting simultaneously on all building components-structural and non-structural. Water loading values used shall be those associated with the base flood. Wind loading values used shall be those required by applicable state or local building standards. Such enclosed space shall be useable solely for parking of vehicles, building access or storage.

(5) Prohibit the use of fill for structural support of buildings within Zones V1-30, VE, and V on the FIRM;

(6) Require that manufactured homes placed or substantially improved within Zones V1-30, V, and VE on the FIRM on sites (a) outside of a manufactured home park or subdivision, (b) in a new manufactured home park or subdivision, (c) in an expansion to an existing manufactured home park or subdivision, or (d) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as the result of a flood, meet the standards of paragraphs (D)(2) to (D)(5) of this rule and that manufactured homes placed or substantially improved on other sites in an existing manufactured home park or subdivision within Zones V1-30, V, and VE on the FIRM meet the requirements of paragraph (B)(12) of this rule.

(7) Require that recreational vehicles placed on sites within Zones V1-30, V, and VE on the FIRM either (a) be on the site for fewer than one hundred eighty consecutive days, (b) be fully licensed and ready for highway use, or (c) meet the requirements in paragraphs (A)(1) and (D)(2) to (D)(5) of this rule. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.