

NOTICE IS HEREBY GIVEN that the Bernalillo County Board of Commissioners on Tuesday, August 12th at the hour of 5:00 p.m., at the Vincent E. Griego Chambers, One Civic Plaza NW, Albuquerque, New Mexico 87102, will consider adopting a proposed Ordinance Amending County Code, Chapter 38, Article II – Flood Damage Prevention Sections 32, 71, 72, 102.

**BERNALILLO COUNTY
BOARD OF COUNTY COMMISSIONERS
ORDINANCE NO. _____**

AN ORDINANCE AMENDING COUNTY CODE, CHAPTER 38, ARTICLE II – FLOOD DAMAGE PREVENTION SECTIONS 32, 71, 72, 102.

DIVISION 1. GENERALLY

Sec. 38-31. Purpose of article.

The regulations and restrictions of this article are designed to promote the public health, safety, and general welfare and/or minimize public and private losses due to flooding in flood hazard areas as shown on the flood insurance rate map.

(Ord. No. 04-4, 2-24-04)

Sec. 38-32. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Appeal means a request for a review of the county floodplain administrator's interpretation of any provision of this article or a request for a variance.

Area of shallow flooding means a designated AO or AH zone on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flow is characterized by ponding or sheet flow.

Area of special flood hazard - is the land in the floodplain within a community subject to a 1 percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map (FHBM). After detailed rate making has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE or V.

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year.

Base Flood Elevation (BFE) – The elevation shown on the Flood Insurance Rate Map (FIRM) and found in the accompanying Flood Insurance Study (FIS) for Zones A, AE, AH, A1-A30, AR, V1-V30, or VE that indicates the water surface elevation resulting from the flood that has a 1 percent chance of equaling or exceeding that level in any given year - also called the Base Flood.

Basement means any area of the building having its floor sub-grade (below ground level) on all sides.

Critical feature means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

Development means any manmade change to improved or unimproved land including, but not limited to, buildings or other structures on the land, mining, filling, paving, excavation, or drilling operations or storage of equipment or materials located within the area of special flood hazard.

Elevated building means a nonbasement building:

- (1) Built, in the case of a building in zones A1-30, A, AO, AH, B, and C to have the top of the elevated floor elevated above the ground by means of pilings, columns (posts and piers), or shear walls parallel to the flow of the water; and
- (2) Adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of zones A1-30, A, A99, AO, AH, B, and C the term "elevated building" also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of floodwaters.

Existing construction means, for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM, or before January 1, 1975, for FIRMs effective before that date. The term "existing construction" may also be referred to as "existing structures."

Existing structures. See Existing construction.

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).

Flood or flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) The overflow of inland waters.
- (2) The unusual and rapid accumulation or runoff of surface waters from any source.

Flood Elevation Study means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

Flood Insurance Rate Map (FIRM) means the 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 See Flood Elevation Study.

Flood protection system means those physical structural works for which funds have been authorized, appropriated and expended, and which have been constructed specifically to modify flooding in order to reduce the extent of the areas within the community subject to a special flood hazard, and the extent of the depths of associated flooding. Such a system typically includes dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

Floodplain or *floodprone area* means any land area susceptible to being inundated by water from any source. See the definition of flooding.

Floodplain administrator means an assigned public official certified in floodplain administration per NM State statute 3-18-7 NMSA 1978

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.

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

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:

- (1) 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;
- (2) 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;

- (3) 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
- (4) Individually listed on a local inventory or historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior or;
 - b. Directly by the Secretary of the Interior in states without approved programs.

Levee means a manmade 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.

Levee system means a flood protection system which consists of levees and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

Lowest floor means the lowest floor of the lowest enclosed area, including the basement. An unfurnished 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 requirement of section 60.3 of the National Flood Insurance Program regulations.

Manufactured home means a structure transportable on 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 recreational vehicles.

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 Effective November 19, 2003 the mean sea level means for purposes of the National Flood Insurance Program, the National American Vertical Datum of 1988 (NAVD '88) to which base flood elevations shown on the community's flood insurance rate map are referenced.

Mobile home See Manufactured Home.

New construction means, for the purpose of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" means 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.

Recreation vehicle means a vehicle which is (i) built on a single chassis; (ii) 400 square feet or less when measured at the largest horizontal projections; (iii) designed to be self-propelled or permanently towable by a light duty truck; and (iv) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Special Flood Hazard Area – See Area of Special Flood Hazard

Start of construction means substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement or 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 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 structure.

Structure means a walled and roofed building, a mobile home, or a gas or liquid storage tank, that is principally located above the ground.

Substantial improvements means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure either:

- (1) Before the improvement or repair is started, or
- (2) If the structure has been damaged and is being restored, before the damage occurred.

For the purpose of this article, substantial improvement is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of a structure commences, whether or not that alteration affects the external dimensions of the structure. Exception: Any project for improvement of a structure to comply with existing state or local health, sanitary, safety, and building code specifications which are solely necessary to ensure safe living conditions and any alteration of a structure listed in the National Register of Historic Places or in the state inventory of historic places are exempted from the definition of the term "substantial improvement."

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

Variance means a grant of relief from the requirements of this article which permits construction in a manner that would otherwise be prohibited by this article.

Violation means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in sections 38-71(b)(1), 38-72, 38-101, and 38-102 is presumed to be in violation until such time as that documentation is provided.

Water surface elevation. Effective November 19, 2003 the water surface elevation means the height, in relation to the National American Vertical Datum of 1988 (NAVD '88) for floods of various magnitudes and frequencies in the floodplains of riverine areas.

(Ord. No. 04-4, 2-24-04)

DIVISION 2. ADMINISTRATION AND ENFORCEMENT

Sec. 38-71. Floodplain administrator; creation of position; duties and responsibilities.

(a) There is hereby created by the county the position of county floodplain administrator to administer and implement this article by granting or denying development permit applications in accordance Bernalillo County and State of New Mexico codes, rules, ordinances and statutes.

(b) The floodplain administrator shall enforce this article, and, in addition thereto and in furtherance thereof, shall:

(1) Review all applications for development permits to assure sites are reasonably safe from flooding and to determine:

a. That the permit requirements of this article have been satisfied.

b. That all necessary permits have been obtained from those federal, state or local governmental agencies from which prior approval is required.

c. Whether or not the proposed development adversely affects the flood-carrying capacity of the area of special flood hazard. For the purpose of this article the expression "adversely affects" means damage to adjacent properties because of rises in flood stages attributed to physical changes of the channel, arroyo and adjoining areas.

1. If it is determined that there is no adverse effect, then the permit shall be granted consistent with the provisions of this article

2. If it is determined that there is an adverse effect, then flood damage mitigation measures shall be made a condition of the permit.

(2) Obtain, review and reasonably utilize any base flood elevation data and floodway data available from a federal, state or other source until base flood elevation data is made available by the Federal Insurance Administrator, in order to carry out the provisions of this article.

(3) Obtain and maintain records of the actual elevation, in relation to mean sea level, of the lowest habitable floor, including the basement, of all new or substantially improved structures.

(4) Obtain and maintain records of actual elevations, in relation to mean sea level, to which structures have been floodproofed and keep the floodproofing certifications required by this article.

- (5) Notify adjacent communities, the state and other affected agencies prior to any alterations or relocations of a watercourse, and submit evidence of such notification to the Federal Insurance Administrator.
- (6) Require that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
- (7) Make interpretations and determine, when needed, the exact location of the boundaries of the areas of special flood hazards in case of conflict between a boundary shown on the flood hazard boundary map and actual field conditions.
- (8) Review all subdivision proposals and other proposed new development, including manufactured home parks and subdivisions for compliance with the provisions of this article and to ensure that the proposals are reasonably safe from flooding.
- (9) When a regulatory floodway has not been designated, the Floodplain Administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's 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 community.

(Ord. No. 04-4, 2-24-04)

DIVISION 3. PROVISIONS FOR FLOOD HAZARD REDUCTION

Sec. 38-101. General standards.

For development in all areas of special flood hazards, the following standards must be complied with:

- (1) Anchoring. All new construction or substantial improvements shall 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) Construction materials and methods. All new construction and substantial improvements shall be constructed:
 - a. With materials and utility equipment resistant to flood damage; and
 - b. Using methods and practices that minimize flood damage.
- (3) Utilities.
 - a. All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

b. New and replacement sanitary sewerage systems shall be designed to minimize or eliminate infiltration of floodwaters into the systems and discharge from the systems into floodwaters.

c. Onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

All new construction or substantial improvements shall be constructed with electrical, heating, plumbing, ventilation 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) Subdivision proposals in special flood hazard areas. Subdivision proposals in special flood hazard areas shall conform to the following:

a. All subdivision proposals shall be consistent with the need to minimize flood damage and shall be reasonably safe from flooding.

b. All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

c. All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

d. Base flood elevation data shall be provided for subdivision proposals and other proposed development which contain at least 50 lots or five acres, whichever is less.

(5) Floodways. Located within areas of special flood hazard established by the Federal Emergency Management Agency (FEMA) in the report entitled "The Flood Insurance Study for Albuquerque and Bernalillo County," dated March 15, 1983, September 30, 1996, April 2, 2002, November 19, 2003, September 26, 2008, or any other subsequent study, are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential, the following provisions shall apply:

a. Encroachments are prohibited, including fill, new construction, substantial improvements and other developments unless certification by a registered professional engineer is provided demonstrating that encroachments shall not result in any increase in flood levels during occurrence of the base flood discharge.

b. If subsection (5)a. of this section is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of this section.

c. Prohibit placement of any mobile homes, except which meet the requirements of section 38-102(4).

(6) Standards of areas of shallow flooding (AO and AH zones). Located within the areas of special flood hazard established by "The Flood Insurance Study for Albuquerque and Bernalillo County," dated March 15, 1983, September 30, 1996, April 2, 2002, November 19, 2003, September 26, 2008,

or any other subsequent study, are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of one to three feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and indeterminate. Therefore, the following provisions apply:

- a. All new construction and substantial improvements of residential structures must have the lowest floor, including the basement, elevated to or above the base flood elevation or the highest adjacent grade at least as high as the depth number specified in feet on the county flood insurance rate map (at least two feet if no depth number is specified).
- b. All new construction and substantial improvements of nonresidential structures must:
 1. Have the lowest floor, including the basement, elevated to or above the base flood elevation or the highest adjacent grade at least as high as the depth number specified in feet on the county flood insurance rate map (at least two feet if no depth is specified); or
 2. Together with attendant utilities 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 structure components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.
- c. A registered professional engineer shall submit a certification to the county floodplain administrator that the standards of this section, as proposed in section 38-102(1), (2) and (3) are satisfied.
- d. Require within zones AH and AO, adequate drainage paths around structures on slopes, to guide floodwaters around and away from proposed structures.

(Ord. No. 04-4, 2-24-04)

Sec. 38-102. Specific standards.

In all areas of special flood hazards where base flood elevation data has been provided, the following specific standards apply:

- (1) Residential construction. New construction and substantial improvements of any residential structure shall have the lowest floor, including the basement, elevated to or above the base flood elevation.
- (2) Nonresidential construction. New construction and substantial improvement of any commercial, industrial or other nonresidential structure shall either have the lowest floor, including the basement, elevated to or above the base flood elevations, or it, together with attendant utility and sanitary facilities shall:
 - a. Be floodproofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;

b. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

c. Be certified by a registered professional engineer that the standards of this subsection are satisfied and that the design and methods of construction are in accordance with acceptable standards of practice as outlined in this subsection.

(3) Enclosures. New construction and substantial improvements, with fully enclosed areas below the lowest floor that are subject to flooding, shall be designed automatically to 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 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.

(4) Manufactured homes.

a. All manufactured homes to be placed or substantially improved within zone A shall be installed using methods and practices which minimize flood damage. For the purpose of this subsection, manufactured homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

b. Manufactured homes to be placed or substantially improved within zones A1-30 and AH and AE on the community's FIRM (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured home park or subdivision on which a manufactured home has incurred "substantial damage" as a result of a flood, shall 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.

c. Manufactured homes placed or substantially improved on sites in an existing manufactured home park or subdivision with Zones A1-30, AH and AE on the community's FIRM that are not subject to the provisions of paragraph (4) of this section shall be elevated so that either:

(i) the lowest floor of the manufactured home is at or above the base flood elevation, or

(ii) 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.

(5) Recreational Vehicles - Recreational vehicles placed on sites within Zones A1-30, AH, and AE shall either (i) be on the site for fewer than 180 consecutive days, or (ii) be fully licensed and ready for highway use, or (iii) meet the permit requirements of Article 4, Section C (1), and the elevation and anchoring requirements for "manufactured homes" in paragraph (4) of this section. 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.

(Ord. No. 04-4, 2-24-04)

DONE this ____ day of _____, 2008.

APPROVED AS TO FORM

BOARD OF COUNTY COMMISSIONERS

County Attorney

Alan B. Armijo, Chair

Deanna Archuleta, Vice Chair

ATTEST

Teresa L. Córdova PhD, Member

E. Tim Cummins, Member

Maggie Toulouse Oliver, County Clerk

Michael Brasher, Member