

Chapter 8

FLOOD PREVENTION AND PROTECTION

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ARTICLE I -- In General

Section 8.1 Statutory authorization

The legislature of the State of Florida has in the *Constitution* and *Statutes of the State of Florida* delegated the responsibility to local governmental units to adopt regulations designed to promote the public health, safety, and general welfare of its citizenry. Therefore, the City Commission of Crescent City; Florida, does ordain as follows.
(Ordinance No. 8711, Article 1, Section A, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.2 Findings of fact

(a) The flood hazard areas of Crescent City are subject to periodic inundation which results in loss of life and property; health and safety hazards; disruption of commerce and governmental services; extraordinary public expenditures for flood protection and relief; and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

(b) These flood losses are caused by the cumulative effect of obstructions in floodplains causing increases in flood heights and velocities, and by the occupancy in flood hazard areas by uses vulnerable to floods or hazardous to other lands which are inadequately elevated, flood proofed, or otherwise unprotected from flood damages.
(Ordinance No. 8711, Article 1, Section B, 1-14-88; Ordinance 11-02, 3-10-11)

Section 8.3 Statement of purpose

It is the purpose of this Chapter to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:

(a) restrict or prohibit uses which are dangerous to health, safety and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

(b) require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(c) control the alteration of natural floodplains, stream channels, and natural protective barriers which are involved in the accommodation of flood waters;

(d) control infilling, grading, dredging and other development which may increase erosion or flood damage; and,

(e) prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.
(Ordinance No. 8711, Article 1, Section C, 1-14-88; Ordinance 11-02, 3-10-11)

Section 8.4 Objectives

The objectives of this chapter are:

- (a) to protect human life and health;
- (b) to minimize expenditure of public money for costly flood control projects;
- (c) to minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- (d) to minimize prolonged business interruptions;
- (e) to minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;
- (f) to 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 flood blight areas; and
- (g) to ensure that potential home buyers are notified that property is in a flood area (Ordinance No. 8711, Article 1, Section D; 1-14-88; Ordinance 11-02; 3-10-11)

Section 8.5 Definitions

Unless specifically defined herein, words or phrases used in this Chapter shall be interpreted so as to give them the meaning they have in common usage and to give this Chapter its most reasonable application.

Addition (to an existing building) means any walled and roofed expansion to the perimeter of a building in which the addition is connected by a common load-bearing wall other than a fire wall. Any walled and roofed addition which is connected by a fire wall or is separated by independent perimeter load-bearing walls is new construction.

Appeal means a request for a review of the codes administrator's interpretation of any provision of this chapter or a request for a variance.

Area of shallow flooding means a designated AO or VO zone on a community's flood insurance rate map (FIRM) with base flood depths from one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and indeterminate, and where velocity flow may be evident.

Area of special flood hazard is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year.

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

Basement means that portion of a building having its floor subgrade (below ground level) on all sides.

Breakaway wall means a wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces without causing damage to the elevated portion of the building or the supporting foundation system.

Building means any structure built for support, shelter, or enclosure for any occupancy or storage.

Coastal high hazard area means the area subject to high velocity waters caused by, but not limited to, hurricane wave wash. The area is designated on a FIRM as zone VI—30, VE or V.

Development means any manmade change to improved or unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, drilling operations, or permanent storage of materials.

Elevated building means a non-basement building built to have the lowest floor elevated above the ground level by means of fill, solid foundation perimeter walls, pilings, columns (posts and piers), shear walls, or breakaway walls.

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 January 14, 1988

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 the overflow of inland or tidal waters, or the unusual and rapid accumulation or runoff of surface waters from any source.

Flood hazard boundary map (FHBM) means an official map of a community, issued by the Federal Emergency Management Agency, where the boundaries of the areas of special flood hazard have been defined as Zone A.

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 hazard and the risk premium zones applicable to the community.

Flood Insurance Study is the official report provided by the Federal Emergency Management Agency. The report contains flood profiles, as well as the flood boundary floodway map and the water surface elevation of the base flood.

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 order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.

Floor means the top surface of an enclosed area in a building (including basement), i.e., top of slab in concrete slab construction or top of wood flooring in wood frame construction. The term does not include the floor of a garage used solely for parking vehicles.

Functionally dependent facility means a facility which cannot be used for its intended purpose unless it is located or carried out in close proximity to water, such as a docking or port facility necessary for the loading and unloading of cargo or passengers, shipbuilding, ship repair, or seafood processing facilities. The term does not include long-term storage, manufacture, sales, or service 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 or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- (3) Individually listed on the Florida inventory of historic places, which has been approved by the Secretary of the Interior; or
- (4) Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. by the approved Florida program as determined by the Secretary of the Interior, or
 - b. directly by the Secretary of the Interior.

Lowest Floor means the lowest 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 non-elevation design requirements of this Chapter.

Mangrove stand means an assemblage of mangrove trees which is mostly low trees noted for a copious development of interlacing adventitious roots above the ground and which contain one or more of the following species: black mangrove (*Avicennia nitida*); red mangrove (*Rhizophora mangle*); white mangrove (*Languncularia racemosa*); and buttonwood (*Conocarpus erecta*).

Manufactured home means a structure, transportable in one or more sections, which is built on a permanent chassis and designed to be used with or without a permanent foundation when connected to the required utilities. The term also includes park trailers, travel trailers, and similar transportable structures placed on a site for 180 consecutive days or longer and intended to be improved property.

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 the average height of the sea for all stages of the tide. It is used as a reference for establishing various elevations within the floodplain. For purposes of this chapter, the term is synonymous with National Geodetic Vertical Datum (NGVD).

National Geodetic Vertical Datum (NGVD) as corrected in 1929 is a vertical control used as a reference for establishing varying elevations within the floodplain.

New construction means structures for which the start of construction commenced on or after the January 14, 1988.

New manufactured home park or subdivision means, for purposed of this Chapter, 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 January 14, 1988.

Recreational vehicle means a vehicle that is:

- (1) built on a single chassis;
- (2) 400 square feet or less when measured at the largest horizontal projection;
- (3) designed to be self-propelled or permanently towable by a light duty truck;

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

Sand dunes means naturally occurring accumulations of sand in ridges or mounds landward of the beach.

Start of construction (for other than new construction or substantial improvements under the Coastal Barrier Resources Act (P. L. 97-348)) includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, or improvement was within 180 days of the permit date. The actual start means the first placement of permanent construction of a structure (including a manufactured home) on a site, such as the pouring, of slabs or footings, installation of piles, construction of columns, or any work beyond the stage of excavation or 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, 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 that is principally above ground, a manufactured home, a gas or liquid storage tank, or other manmade facilities or infrastructures.

Substantial improvement means any combination of repairs, reconstruction, alteration, or improvements to a structure, taking place during the life of a structure, in which the cumulative cost equals or exceeds fifty percent [50%] of the market value of the structure. The market value of the structure should be:

- (1) the appraised value of the structure prior to the start of the initial repair or improvement, or
- (2) in the case of damage, the value of the structure prior to the damage occurring.

For the purposes of this definition, “substantial improvement” is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include any project for improvement of a structure required to comply with existing health, sanitary or safety code specifications which are solely necessary to assure safe living conditions.

Variance is a grant of relief from the requirements of this Chapter which permits construction in a manner otherwise prohibited by this Chapter where specific enforcement would result in unnecessary hardship.

(Ordinance. No. 8711, Article 2, 1-14-88; Ordinance No.11-02, 03-10-2011)

Section 8.6 Lands to which this Chapter applies

This Chapter shall apply to all areas of special flood hazard within the jurisdiction of Crescent City; Florida.
(Ordinance No. 8711, Article 3, Section A, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.7 Basis for establishing the areas of special flood hazard.

The areas of special flood hazard identified by the *Federal Emergency Management Agency in Flood Insurance Study (FIS)* and accompanying *Flood Insurance Rate Maps (FIRMs)* dated December 18, 1979, with accompanying maps and other supporting data, and any revision thereto, are adopted by reference and declared to be a part of this Chapter.
(Ordinance No. 8711, Article 3, Section B, 1-14-88; Ordinance No.11-02, 03-10-2011)

Section 8.8 Establishment of development permit

A development permit shall be required in conformance with the provisions of this Chapter prior to the commencement of any development activities.
(Ordinance No. 8711, Article 3, Section C, 1-14-88; Ordinance No. 11-02, 3-10-11)
Cross reference: Permit procedures, Section 8.28

Section 8.9 Compliance required

No structure or land shall hereafter be located, extended, converted or structurally altered without full compliance with the terms of this Chapter and other applicable regulations.
(Ordinance No, 8711, Article 3, Section D, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.10 Abrogation and greater restrictions

This Chapter is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this Chapter and another ordinance conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
(Ordinance. No. 8711, Article 3, Section E, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.11 Interpretation

In the interpretation and application of this Chapter all provisions shall be:

- (a) considered as minimum requirements;
- (b) liberally construed in favor of the governing body; and (3) deemed neither to limit nor repeal any other powers granted under state statutes.

(Ordinance No. 8711, Article 3, Section F, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.12 Warning and disclaimer of liability

The degree of flood protection required by this Chapter is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by manmade or natural causes. This Chapter does not imply that land outside the areas of special flood hazard or uses permitted within such areas will be free from flooding or flood damages. This Chapter shall not create liability on the part of the City of Crescent City or by any officer or employee thereof for any flood damages that result from reliance on this Chapter or any administrative decision lawfully made hereunder.

(Ordinance No. 8711, Article 3, Section G, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.13 Penalties for violation

Violation of the provisions of this Chapter or failure to comply with any of its requirements, including violation of conditions and safeguards established in connection with grants of variance or special exceptions, shall constitute a misdemeanor. Any person who violates this Chapter or fails to comply with any of its requirements shall, upon conviction thereof, be fined not more than five hundred dollars [\$500.00] or imprisoned for not more than thirty [30] days, or both; and in addition, shall pay all costs and expenses involved in the case. Each day such violation continues shall be considered a separate offense. Nothing herein contained shall prevent the City of Crescent City from taking such other lawful action as is necessary to prevent or remedy any violation.

(Ordinance No. 8711, Article 3, Section H, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.14 Severability

The provisions of this Chapter are severable. If a court determines that a word, phrase, clause, sentence, paragraph, subsection, section, or other provision is invalid or that the application of any part of the provision to any person or circumstance is invalid, the remaining provisions and the application of those provisions to other persons or circumstances are not affected by that decision.

(Ordinance No. 11-02, 03-10-2011; Ordinance No. 11-02, 3-10-11)

Section 8.15-8.25 Reserved

ARTICLE II -- Administration

Section 8.26 Designation of codes administrator

The codes administrator is hereby appointed as the Flood Plain Administrator to administer and implement the provisions of this Chapter.
(Ordinance No. 8711, Article 4, Section A, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.27 Duties and responsibilities of the codes administrator

Duties of the codes administrator shall include, but not be limited to:

- (a) reviewing all development permits to assure that the permit requirements of this Chapter have been satisfied.
- (b) requiring copies of additional Federal, State of Florida, or local permits, especially as they relate to Chapters 161.053; 320.8249; 320.8359; 373.036; 380.05; 381.0065; and 553, Part IV, *Florida Statutes*, to be submitted along with the development permit application and maintain such permits on file with the development permit.
- (c) notifying adjacent communities and the *St. Johns River Water Management District* prior to any alteration or relocation of a watercourse, and submitting evidence of such notification to the *Federal Emergency Management Agency*.
- (d) assuring that maintenance is provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.
- (e) verifying and recording the actual elevation (in relation to mean sea level) of the lowest floor (including basement) of all new or substantially improved structures, in accordance with Section 8.28(b).
- (f) verifying and recording the actual elevation (in relation to mean sea level) to which the new or substantially improved structures have been flood proofed, in accordance with section 8.28(b).
- (g) in coastal hazard areas, obtaining certification from a registered professional engineer or architect that the structure is designed to be securely anchored to adequately anchored pilings or columns in order to withstand velocity waters and hurricane wave wash.
- (h) in coastal high hazard areas, reviewing plans for adequacy of breakaway walls in accordance with Section 8.42.
- (i) when flood proofing is utilized for a particular structure, obtaining certification from a registered professional engineer or architect, in accordance with Section 8.42(2).
- (j) where interpretation is needed as to the exact location of boundaries of the areas of special flood hazard (for example, where there appears to be a conflict between a mapped

boundary and actual field conditions), making the necessary interpretation. The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in this Article.

(k) when base flood elevation data or floodway data have not been provided in accordance with Section 8.7, then obtaining, reviewing and reasonably utilizing any base flood elevation, and floodway data available from a federal, state or other source, in order to administer the provisions of Article III.

(l) when new technical data is obtained through special studies, water management or control projects or engineering concerning large developments or subdivisions, sending FEMA within six [6] months, changes in the base flood elevation by submitting technical or scientific data so insurance & floodplain management can be based on current data

All records pertaining to the provisions of this Chapter shall be maintained in the office of the codes administrator and shall be open for public inspection.

(Ordinance No. 8711, Article 4, Section C, 1-14-88; Ordinance No.11-02, 03-10-2011)

Section 8.28 Permit Procedures

Application for a development permit shall be made to the codes administrator on forms furnished by him or her prior to any development activities, and may include, but not be limited to, the following plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

(a) **Application stage:**

- (1) elevation in relation to mean sea level of the proposed lowest floor (including basement) of all structures;
- (2) elevation in relation to mean sea level to which any nonresidential structure will be flood proofed;
- (3) certificate from a registered professional engineer or architect that the nonresidential flood proofed structure will meet the flood proofing criteria in Section 8.42(b);
- (4) description of the extent to which any watercourse will be altered or relocated as a result of proposed development; and

(b) **Construction stage.** Provide a floor elevation or flood proofing certification after the lowest floor is completed, or in instances where the structure is subject to the regulations applicable to coastal high hazard areas, after placement of the horizontal structural members of the lowest floor. Upon placement of the lowest floor, or flood proofing by whatever construction means, or upon placement of the horizontal structural members of the lowest floor, whichever is

applicable, it shall be the duty of the permit holder to submit to the codes administrator a certification of the elevation of the lowest floor, flood proofed elevation, or the elevation of the lowest portion of the horizontal structural members of the lowest floor, whichever is applicable, as built, in relation to mean sea level. Said certification shall be prepared by or under the direct supervision of a registered land surveyor or professional engineer and certified by same. When flood proofing is utilized for a particular building, said certification shall be prepared by or under the direct supervision of a professional engineer or architect and certified by same. Any work undertaken prior to submission of the certification shall be at the permit holder's risk. The codes administrator shall review the floor elevation survey data submitted. Deficiencies detected by such review shall be corrected by the permit holder immediately and prior to further progressive work being permitted to proceed. Failure to submit the survey or failure to make said corrections required hereby shall be cause to issue a stop-work order for the project. (Ordinance. No. 8711, Article 4, Section B, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.29 Variance Procedures

(a) The Board of Adjustment and Appeals, as established by the City Commission, shall hear and decide appeals and requests for variances from the requirements of this Chapter.

(b) The Board of Adjustment and Appeals shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the codes administrator in the enforcement or administration of this chapter.

(c) Any person aggrieved by the decision of the Board of Adjustment and Appeals, or any taxpayer, may appeal such decision to the Circuit Court, as provided in *Florida Statutes*.

(d) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the *National Register of Historic Places* or the state inventory of historic places without regard to the procedures set forth in the remainder of this section, except for paragraphs 8.29(h)(1) and (4), and provided the proposed reconstruction, rehabilitation, or restoration will not result in the structure losing its historical designation.

(e) In passing upon such applications, the Board of Adjustment and Appeals shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this Chapter, and:

- (1) the danger that materials may be swept onto other lands to the injury of others;
- (2) the danger to life and property due to flooding or erosion damage;
- (3) the susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
- (4) the importance of the services provided by the proposed facility to the community;

- (5) the necessity of the facility to a waterfront location, in the case of a functionality dependent facility;
- (6) the availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
- (7) the compatibility of the proposed use with existing and anticipated development;
- (8) the relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
- (9) the safety of access to the property in times of flood for ordinary and emergency vehicles;
- (10) the expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site; and
- (11) the costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, and water systems, and streets and bridges.

(f) Upon consideration of the factors listed above, and the purposes of this Chapter, the Board of Adjustment and Appeals may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Chapter.

(g) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

(h) Conditions for variances:

- (1) Variances shall only be issued upon a determination that the variance is the minimum necessary; considering the flood hazard, to afford relief and in the instance of a historical building, a determination that the variance is the minimum necessary so as not to destroy the historic character and design of the building.
- (2) Variances shall only be issued upon:
 - (i) a showing of good and sufficient cause
 - (ii) a determination that failure to grant the variance would result in exceptional hardship
 - (iii) a determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisance, cause fraud on or

victimization of the public, or conflict with existing local laws or ordinances.

- (3) Any applicant to whom a variance is granted shall be given written notice specifying the difference between the base flood elevation and the elevation to which the structure is to be built and stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.
- (4) The codes administrator shall maintain the records of all appeal actions and report any variances to the *Federal Emergency Management Agency* upon request.

(Ordinance No. 8711, Article 4, Section D, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.30-8.40 Reserved

ARTICLE III -- Provisions for Flood Hazard Reduction

Section 8.41 General standards

In all areas of special flood hazard the following provisions are required:

- (a) New construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure;
- (b) Manufactured homes shall be anchored to prevent 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 standard shall be in addition to and consistent with applicable state requirements for resisting wind forces;
- (c) New construction and substantial improvements shall be constructed with materials and utilize equipment resistant to flood damage;
- (d) New construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;
- (e) Electrical, heating, ventilation, plumbing, air conditioning equipment, and other service facilities shall be designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding;
- (f) New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;
- (g) 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;

(h) On-site waste disposal systems shall be located and constructed to avoid impairment to them or contamination from them during flooding;

(i) Any alteration, repair, reconstruction or improvements to structure which is in compliance with the provisions of this chapter, shall meet the requirements of “new construction” as contained in this Chapter;

(j) Use of septic tanks in flood-prone areas will be restricted as specified by the county department of health and all such sewage disposal systems shall be required to connect to central sewage systems when system collection lines are within 200 feet of subject property;

(k) Dredging and filling of lands within floodplains shall be controlled so as to preserve the natural functions of the 100-year floodplain; all proposed development shall be located on the non-floodplain portions of the site, or, for proposed development areas that lie entirely within the 100-year floodplain, all structures shall be required to be elevated on pilings;

(l) In addition, the following criteria will apply to development in the 100-year floodplain;

(1) No hazardous materials or waste shall be stored within the 100-year floodplain;

(2) Clearing of native vegetation will be minimized in the 100-year floodplain by establishing the following open space ratios for the land uses identified below:

- | | |
|--------------------------|----------------|
| a. Residential land use: | 60% open space |
| b. Commercial land use: | 50% open space |
| c. Industrial land use: | 45% open space |

(m) Any development within a flood-prone area will maintain the natural topography and hydrology of the development site.

(Ordinance No. 8711, Article 5, Section A, 1-14-88; Ordinance No. 9209, Section 3, 12-10-92; Ordinance No. 11-02, 3-10-11)

Section 8.42 Specific standards

In all areas of special flood hazard where base flood elevation data have been provided, as set forth in Section 8.7 or Section 8.27(k), the following provisions are required:

(a) **Residential construction.** Development in the FEMA 100-year flood hazard zone will be constructed so that the lowest floor elevation is at least one foot above the base flood elevation as established by the FEMA Flood Insurance Rate Maps. Should solid foundation perimeter walls be used to elevate a structure, openings sufficient to facilitate the unimpeded movements of flood waters shall be provided in accordance with standards of subsection (3) of this section.

(b) **Nonresidential construction.** New construction or substantial improvement of any commercial, industrial, or nonresidential structure shall have the lowest floor, including basement, elevated no lower than the level of the base flood elevation. Structures located in all A-zones may be flood proofed in lieu of being elevated provided that all areas of the structure below the required elevation are watertight with walls substantially impermeable to the passage of water, and use structural components having the capability of resisting hydrostatic and hydrodynamic loads and the effect of buoyancy. A registered professional engineer or architect shall certify that the standards of this subsection are satisfied. Such certification shall be provided to the official as set forth in Section 8.27(i).

(c) **Elevated buildings.** New construction or substantial improvements of elevated buildings that include fully enclosed areas formed by foundation and other exterior walls below the base flood elevation shall be designed to preclude finished living space and designed to allow for the entry and exit of floodwaters to automatically equalize hydrostatic flood forces on exterior walls.

- (1) Designs for complying with this requirement must either be certified by a professional engineer or architect or meet the following minimum criteria:
 - a. Provide 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;
 - 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 they permit the automatic flow of floodwaters in both directions.
- (2) Electrical, plumbing, and other utility connections are prohibited below the base flood elevation.
- (3) Access to the enclosed area shall be the minimum necessary to allow for parking of vehicles (garage door) or limited storage of maintenance equipment used in connection with the premises (standard exterior door) or entry to the living area (stairway or elevator).
- (4) The interior portion of such enclosed area shall not be partitioned or finished into separate rooms.

(d) **Floodways.** Located within areas of special flood hazard established in Section 8.7 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris and potential projectiles and has erosion potential, the following provisions shall apply:

- (1) Prohibit encroachments, including fill, new construction, substantial improvements and other developments unless certification (with supporting technical data) 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;
- (2) If subparagraph (4)a, above, is satisfied, all new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Article III;
- (3) Prohibit the placement of manufactured homes (mobile homes), except in an existing manufactured home (mobile home) park or subdivision. A replacement manufactured home may be placed on a lot in an existing manufactured home park or subdivision provided the anchoring standards of Section 8.41(b) and the elevation standards of Section 8.42(a) are met.

(Ordinance No. 8711, Article 5, Section B, 1-14-88; Ordinance No. 9209, Section 4.1 & 4.2, 12-10-92; Ordinance No.11-02, 03-10-2011)

Section 8.43 Standards for streams without established base flood elevations and/or floodways.

Located within the areas of special flood hazard established in Section 8.7, where small streams exist but where no base flood data have been provided or where no floodways have been provided, the following provisions apply:

(a) No encroachments, including fill material or structures, shall be located within a distance of the stream bank equal to two times the width of the stream at the top of bank or 20 feet each side from top of bank, whichever is greater, unless certification by a registered professional engineer is provided demonstrating that such encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

(b) New construction or substantial improvements of structures shall be elevated or flood proofed to elevations established in accordance with Section 8.27(k).
(Ordinance. No. 8711, Article 5, Section C, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.44 Standards for subdivision proposals

(a) All subdivision proposals shall be consistent with the need to minimize flood damage.

(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 hazards.

(d) Base flood elevation data shall be provided for subdivision proposals and other proposed development (including manufactured home parks and subdivisions) which is greater than the lesser of fifty [50] lots or five [5] acres.

(Ordinance No. 8711, Article 5, Section D, 1-14-88; Ordinance No. 11-02, 3-10-11)

Section 8.45 Standards for areas of shallow flooding (AO zones)

Located within the areas of special flood hazard established in Section 8.7 are areas designated as shallow flooding areas. 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 shall have the lowest floor, including basement, elevated to the depth number specified on the flood insurance rate map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated at least two feet above the highest adjacent grade.

(b) All new construction and substantial improvements of nonresidential structures shall:

(1) have the lowest floor, including basement, elevated to the depth number specified on the flood insurance rate map, in feet, above the highest adjacent grade. If no depth number is specified, the lowest floor, including basement, shall be elevated at least two feet above the highest adjacent grade; or

(2) together with attendant utility and sanitary facilities be completely flood-proofed to or above that level so that any space below that level 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.

(Ordinance No. 8711, Article 5, Section E, 1-14-88; Ordinance 11-02, 3-10-11)

Section 8.46 Standards for Manufactured Homes and Recreational Vehicles

(a) All manufactured homes placed or substantially improved individual lots, or parcels in expansions to existing manufactured home parks or subdivisions, in a new manufactured home park or subdivision, or in substantially improved manufactured home parks or subdivision, must meet all the requirements for new construction including the elevation and anchoring requirements of this section.

(b) All manufactured homes placed or substantially improved in an existing manufactured home park or subdivision, in a new manufactured home park or subdivision, or in a substantially improved manufactured home park or subdivision, must meet all the requirements for new construction, including the elevation and anchoring requirements of this section.

- (c) Elevation and anchoring standards for manufactured homes:
 - (1) The lowest floor of the manufactured home shall be elevated to, or above, the level of the base flood elevation or, the manufactured home chassis shall be supported by reinforced piers or other foundation elements of at least an equivalent strength of no less than thirty-six [36] inches in height above the ground.
 - (2) The manufactured home must be anchored to the adequately anchored foundation system to resist flotation, collapse and lateral movement.
 - (3) In an existing manufactured home park or subdivision on which a manufactured home has incurred “substantial damage” as the result of a flood, any manufactured home placed or substantially improved must meet the standards of Section 8.42 of this Chapter.
- (d) All recreational vehicles placed on sites must either:
 - (1) be fully licensed and ready for highway use (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); or
 - (2) meet all the requirements for new construction, including anchoring and elevation requirements of Section 8.42 of this Chapter; or
 - (3) be on the site for fewer than 180 consecutive days.

(Ordinance No. 03-003, 10-09-03; Ordinance No.11-02, 03-10-2011)