

**CHAPTER 12.2
FLOOD DAMAGE PREVENTION**

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ARTICLE I. GENERAL PROVISIONS

Sec. 12.2-10. Short title

This chapter may be cited as "The Solano County Flood Damage Prevention Ordinance."

(Ord. No. 1427, §1; Ord. No. 1505, §2)

Sec. 12.2-11. Finding of fact

(a) The flood hazard areas of the County of Solano 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 increased by the cumulative effect of obstructions in areas of special flood hazards which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately flood proofed, elevated or otherwise protected from flood damage also contribute to the flood loss.

(Ord. No. 1427, §1)

Sec. 12.2-12. Statement of purpose

It is the purpose of this ordinance to promote the public health, safety, and general welfare; and to minimize public and private losses due to flood conditions in specific areas by legally enforceable regulations applied uniformly throughout the unincorporated County to all publicly and privately owned land within the flood prone, mudslide (i.e. mudflow) or flood related erosion areas.

These provisions are designed:

- (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 areas of special flood hazard;

(f) To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas;

(g) To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

(h) To ensure that potential buyers are notified that property is in an area of special flood hazard.

(Ord. No. 1427, §1; Ord. No. 1700, §1)

Sec. 12.2-13. Methods of reducing flood losses

In order to accomplish its purposes, this ordinance includes methods and provisions for:

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

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

(c) Controlling the alteration of natural floodplains, stream channels, and natural protective barriers which help accommodate or channel flood waters;

(d) Controlling filling, grading, dredging, and other development which may increase flood damage; and

(e) Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

(Ord. No. 865, §1; Ord. No. 1427, §1)

ARTICLE II. DEFINITIONS

Sec. 12.2-20. Definitions

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

A zone – see Special flood hazard area.

Accessory structure means a structure that is either:

(1) Solely for the parking of no more than 2 cars; or

(2) A small, low cost shed for limited storage, less than 150 square feet and \$1500 in value.

Accessory use means a use which is incidental and subordinate to the principal use of the parcel of land on which it is located.

Appeal means a request for a review of the floodplain administrator's interpretation of any provision of this ordinance.

Area of shallow flooding means a designed AO, or AH or VO Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Area of special flood hazard - See Special flood hazard area.

Base flood means the flood having a one percent chance of being equaled or exceeded in any given year (also called the "100-year flood").

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

Base flood elevation (BFE) means the elevation shown on the Flood Insurance Rate Map for Zones AE, AH, A1-30, VE and V1-V30 that indicate the water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year.

Breakaway walls are any type of walls, whether solid or lattice, and whether constructed of concrete, masonry, wood, metal, plastic, or any other suitable material which is not part of the structural support of the building and which is designed to break away under abnormally high tides or wave action without causing any damage to the structural integrity of the building on which they are used or any buildings to which they might be carried by flood waters. A breakaway wall shall have a safe design loading resistance of not less than 10 or more than 20 pounds per square foot. Use of breakaway walls must be certified by a registered engineer or architect and shall meet the following conditions:

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

(2) The elevated portion of the building shall not incur any structural damage due to the effects of wind and water loads acting simultaneously in the event of the base flood.

Coastal high hazard area is the area subject to high velocity waters, including coastal and tidal inundation or tsunamis. The area is designated on a Flood Insurance Rate Map (FIRM) as Zone V1-V30, VE or V.

Building – see Structure

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 and materials.

Encroachment means the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a floodplain which may impede or alter the flow capacity of a floodplain.

Existing manufactured home park or subdivision means a manufactured home park or subdivision for which the construction or 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 February 2, 1982.

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 flood waters, (2) the unusual and rapid accumulation of runoff of surface waters from any source, and/or (3) the collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels; or suddenly caused by an unusually high water level in a natural body of water accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in this definition.

Flood Boundary and Floodway Map (FBFM) means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of flood hazard and the floodway.

Flood Insurance Rate Map (FIRM) means the official map on which the Federal Emergency Management Agency or Federal Insurance Administration has delineated both the areas of special flood hazards and the risk premium zones applicable to the community.

Flood Insurance Study means the official report provided by the Federal Insurance Administration that includes flood profiles, the FIRM, the Flood Boundary and Floodway Map, and the water surface elevation of the base flood.

Floodplain administrator means the official appointed to administer and implement this Chapter.

Floodplain or flood-prone area means any land area susceptible to being inundated by water from any source (see definition of "flooding").

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, floodplain management regulations and open space plans.

Floodplain management regulations means zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as floodplain ordinance, grading ordinance, and erosion control ordinance) and other applications of police power. The term describes such standards for the purpose of flood damage prevention and reduction.

Flood proofing means any combination of structural and nonstructural additional 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 content. For guidelines on dry and wet flood proofing, see FEMA Technical Bulletins TB 1-93, TB 3-93, and TB 7-93.

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. Also referred to as "regulatory floodway."

Floodway Fringe is that area of the floodplain on either side of the "regulatory floodway" where encroachment may be permitted.

Fraud and victimization as related to section 12.2-60 of this ordinance, means that the variance granted must not cause fraud or victimization of the public. In examining this requirement, the Board of Supervisors will consider the fact that every newly constructed building adds to government responsibilities and remains a part of the community for fifty to one-hundred years. Buildings that are permitted to be constructed below the base flood elevation are subject during all those years to increased risk of damage from floods, while future owners of the property and the community as a whole are subject to all the costs, inconvenience, danger and suffering that those increased flood damages bring.

In addition, future owners may purchase the property, unaware that it is subject to potential flood damage, and can be insured only at very high insurance rates.

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.

Hardship as related to section 12.2-60 of this ordinance means the exceptional hardship that would result from a failure to grant the requested variance. The Board of Supervisors requires that the variance be exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional. Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

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 of historic places in communities with historic preservation programs that have been certified either by an approved state program as determined by the Secretary of the Interior or 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.

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

Lowest floor means the lowest floor of the lowest enclosed area (including basement).

(1) An unfinished or flood resistant enclosure below the lowest floor, 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, it conforms to applicable non-elevation design requirements, including, but not limited to:

- (A) The flood openings standard in Section 12.2-50(c)(4);
- (B) The anchoring standards in Section 12.2-50(a);
- (C) The construction materials and methods standards in 12.2-50(b); and
- (D) The standards for utilities in 12.2-51.

(2) For residential structures, all subgrade enclosed areas are prohibited as they are considered to be basements (see Basement definition.) This prohibition includes below-grade garages and storage areas.

Manufactured home (for floodplain management purposes) 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" also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than 180 consecutive days.

Manufactured home park or subdivision means a parcel (or contiguous parcels) of land divided into two or more manufactured home lots for sale or rent.

Market value is defined in the County of Solano substantial damage/improvement procedures. See section 12.2-43(B).

Mean sea level means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

New construction means, for floodplain management purposes, structures for which the "start of construction" commenced on February 2, 1982, 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 February 2, 1982.

Obstruction includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation or other material in, along, across or projecting into any watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

One hundred year flood or 100-year flood means a flood which has a one percent annual probability of being equaled or exceeded. It is identical to the "base flood," which will be the term used throughout this chapter.

Person means an individual or his or her agent, firm, partnership, association or corporation, or agent of the aforementioned groups, or this state or its agencies or political subdivisions.

Program deficiency means a defect in a community's floodplain management regulations or administrative procedures that impairs effective implementation of those floodplain management regulations.

Public safety and nuisance as related to section 12.2-60 of this ordinance, means that the granting of a variance must not result in anything which is injurious to safety or health of an entire community or neighborhood, or any considerable number of persons, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin.

Recreational vehicle means a vehicle which 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;
- and

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

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 one foot.

Remedy a violation means to bring the structure or other development into compliance with state or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the ordinance or otherwise deterring future similar violations, or reducing federal financial exposure with regard to the structure or other development.

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

Sand dunes mean naturally occurring accumulation of sand in ridges or mounds landward of the beach.

Sheet flow area – see “**Area of shallow flooding.**”

Special flood hazard area (SFHA) means an area in the floodplain subject to a 1 percent or greater of flooding in any given year. Is shown on a Flood Boundary and Floodway Map (FBFM) or Flood Insurance Rate Map (FIRM) as Zone A, AO, A1-30, AE, A99, AH, V0, V1-V30, VE or V.

Start of construction includes substantial improvement, and other proposed new development, and 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. 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 storage 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 erecting 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.

Structure means a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

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.

Substantial improvement means any repair, 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 either:

- (1) Before the “start of construction” of the improvement; or
- (2) If the structure has been damaged, and is being restored, before the damage occurred.

The term does not however, include either:

- (1) Any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions; or
- (2) 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 from the requirements of this ordinance which permits construction in a manner that would otherwise be prohibited by this chapter.

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 this ordinance is presumed to be in violation until such time as that documentation is provided.

Water surface elevation means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

Watercourse means a lake, river, creek, stream, wash, arroyo, channel or other topographic feature on or over which waters flow at least periodically. Watercourse includes specifically designated areas in which substantial flood damage may occur.

(Ord. No. 1427, §1; Ord. No. 1700, §2)

ARTICLE III. GENERAL PROVISIONS

Sec. 12.2-30. Lands to which this ordinance applies

This ordinance shall apply to all special flood hazard areas within the jurisdiction of the County of Solano.

(Ord. No. 1427, §1)

Sec. 12.2-31. Basis for establishing special flood hazard areas

The special flood hazard areas identified by the Federal Emergency Management Agency (FEMA) in a scientific and engineering report entitled "Flood Insurance Study, Solano County, California," dated February 2, 1982, and subsequent revisions, along with accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs) February 2, 1982 and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this ordinance. This Flood Insurance Study is on file at the Office of Resource Management. This Flood Insurance Study and attendant mapping is the minimum area of applicability of this ordinance and may be supplemented by studies for other areas which allow implementation of this chapter and which are adopted by the board of supervisors.

(Ord. No. 1427, §1; Ord. No. 1700, §3)

Sec. 12.2-32. Compliance

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this chapter and other applicable regulations. Violations of the provisions of this chapter by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a misdemeanor. Nothing herein shall prevent the board of supervisors from taking such lawful action as is necessary to prevent or remedy any violation including, but not limited to, any civil action for injunctive relief.

(Ord. No. 1427, §1; Ord. No. 1700, §4)

Sec. 12.2-33. 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, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions, shall prevail.

(Ord. No. 1427, §1)

Sec. 12.2-34. 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 board of supervisors; and
- (c) Deemed neither to limit nor repeal any other powers granted under state statutes.

(Ord. No. 1427, §1)

Sec. 12.2-35. 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 man-made or natural causes. This chapter does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damage. This chapter shall not create liability on the part of the County of Solano, any officer or employee thereof, the State of California or the Federal Emergency Management Agency (FEMA), for any flood damages that result from reliance on this chapter or any administrative decision lawfully made.

(Ord. No. 1427, §1; Ord. No. 1700, §5)

Sec. 12.2-36. Severability

This chapter and the various parts thereof are hereby declared to be severable. Should any section of this chapter be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the chapter as a whole, or any portion thereof other than the section so declared to be unconstitutional or invalid.

(Ord. No. 1427, §1)

ARTICLE IV. ADMINISTRATION**Sec. 12.2-40. Designation of the floodplain administrator**

The director of the department of Resource Management is hereby appointed to administer and implement this chapter by granting or denying permits in accordance with its provisions.

(Ord. No. 1427, §1; Ord. No. 1487, §1; Ord. No. 1506 §1; Ord. No. 1700, §6.)

Sec. 12.2-41. Permits

Upon application for a building, zoning, use or grading permit, the Solano County building inspector, Director of Resource Management, or other employee responsible (responsible employee) for review of such applications, shall review the submitted application and plans and determine whether or not the site of the proposed structure is within any special flood hazard area established in Section 12.2-31. If the site of the proposed structure or development lies within any special flood hazard area, the application and plans shall be referred to the floodplain administrator for review as specified in Section 12.1-43. If the site of the proposed structure or development does not fall within said special flood zone, the permit need not be reviewed by the floodplain administrator in regard to the flood hazard regulations and shall be processed in accordance with standard procedure.

(Ord. No. 1427, §1; Ord. No. 1700, §7)

Sec. 12.2-42. Requirements for submission of information

The floodplain administrator shall review and approve all applications for permits before construction or development begins within any area of special flood hazards established in Section 12.2-31. The floodplain administrator may require submission of plans in duplicate drawn to scale showing the nature, location, dimensions, and elevation of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. In addition, the following information shall be required:

- (A) Proposed elevation in relation to mean sea level, of the lowest floor (including basement) of all structures; in Zone A0 or V0, elevation of highest adjacent grade and proposed elevation of lowest floor of all structures;
- (B) Proposed elevation in relation to mean sea level to which any structure will be flood proofed;
- (C) All appropriate certifications listed in Section 12.2-43(d) of this chapter; and
- (D) Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

(Ord. No. 1427, §1; Ord. No. 1700, §8)

Sec. 12.2-43. Duties and responsibilities of the floodplain administrator

The duties and responsibilities of the floodplain administrator shall include, but not be limited to:

- (a) **Permit review.**

- (1) Review all building, zoning, use or grading permit applications referred by the responsible employee to determine that the permit requirements of this chapter have been satisfied including determination of substantial improvement and substantial damage of existing structures;
- (2) Determine that all other state and federal permits have been obtained;
- (3) Determine that the site will be reasonably safe from flooding; and
- (4) Determine that the proposed development does not adversely affect the carrying capacity of areas where base flood elevations have been determined but a floodway has not been designated. This means 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 in the county of Solano; and
- (5) All Letters of Map Revision (LOMR's) for flood control projects are approved prior to the issuance of building permits. Building Permits must not be issued based on Conditional Letters of Map Revision (CLOMR's). Approved CLOMR's allow construction of the proposed flood control project and land preparation as specified in the "start of construction" definition.

(b) Development of Substantial Improvement and Substantial Damage Procedures.

- (1) Using FEMA publication FEMA 213, "Answers to Questions About Substantially Damaged Buildings," develop detailed procedures for identifying and administering requirements for substantial improvement and substantial damage, to include defining "Market Value."
- (2) Assure procedures are coordinated with other departments/divisions and implemented by county staff.

(c) Review, Use and Development of Other Base Flood Data.

When base flood elevation data has not been provided in accordance with Section 12.2-31, the floodplain administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source, in order to administer Article V.

NOTE: A base flood elevation may be obtained using one of two methods from the FEMA publication, FEMA 265, "Managing Floodplain Development in Approximate Zone A Areas – A Guide for Obtaining and Developing Base (100-year) Flood Elevations" dated July 1995.

(d) Notification of Other Agencies.

- (1) Whenever a watercourse is to be altered or relocated:

Notify adjacent communities and the California Department of Water Resources prior to alteration or relocation of a major watercourse, and submit evidence of such notification to the Federal Emergency Management Agency. Require that the flood carrying capacity of the altered or relocated portion of said watercourse is maintained.

- (2) Base Flood Elevation changes due to physical alterations:

Within 6 months of information becoming available or project completion, whichever comes first, the floodplain administrator shall submit or assure that the permit applicant submits technical or scientific data to FEMA for a Letter of Map Revision (LOMR). All LOMR's for flood control projects are approved prior to the issuance of building permits. Building permits must not be issued based on Conditional Letters of Map Revision (CLOMR's). Approved CLOMR's allow construction of the proposed flood control project and land preparation as specified in the "start of construction" definition.

Such submissions are necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements are based on current data.

- (3) Changes in corporate boundaries:

Notify FEMA in writing whenever the corporate boundaries have been modified by annexation or other means and include a copy of a map of the community clearly delineating the new corporate limits.

(e) Documentation of Floodplain Development.

Obtain and maintain for public inspection and make available as needed:

- (1) The certification required in Section 12.2-50(c) (1) (lowest floor elevations);
- (2) The certification required in Section 12.2-50(C)(3)(c) (elevation or flood proofing of nonresidential structures);
- (3) The certification required in Section 12.2-50(C)(4) (wet flood proofing standard);
- (4) The certified elevation required in Section 12.2-52(B) (subdivision standards);

(5) The certification required in Section 12.2-54(A) (floodway encroachments); and

(6) The information required in Section 12.2-55(F) (coastal construction standards);

(f) Map Determination.

Make interpretations where needed, as to the exact location of the boundaries of the areas of special flood hazards for the purposes of Section 12.2-43(A) (for example, where there appears to be a conflict between mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 12.2-60.

(g) Remedial Action.

Take action to remedy violations of this ordinance as specified in Section 12.2-32 herein.

(h) Biennial Report.

Complete and submit Biennial Report to FEMA.

(i) Planning.

Assure community's General Plan is consistent with floodplain management objectives in this Chapter.

(Ord. No. 1427, §1; Ord. No. 1700, §9)

ARTICLE V. PROVISION FOR FLOOD HAZARD REDUCTION

Sec. 12.2-50. Standards of construction

In all areas of special flood hazards, the following standards are required:

(a) Anchoring.

(1) All new construction and substantial improvements shall be adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

(2) All manufactured homes shall meet the anchoring standards of Section 12.2-50.

(b) Construction Materials and Methods.

- (1) All new construction and substantial improvements including manufactured homes shall be constructed with materials and utility equipment resistant to flood damage.
- (2) All new construction and substantial improvements including manufactured homes shall be constructed using methods and practices that minimize flood damage.
- (3) All new construction and substantial improvements including manufactured homes shall 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) Within Zones AH and A0, and V0, adequate drainage paths around structures on slopes to guide flood waters around and away from proposed structures shall be constructed.

(c) Elevation and Flood proofing.

- (1) New construction and substantial improvements of any residential structure shall have the lowest floor, including basement, elevated at least one foot above the base flood elevation. Upon the completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered professional engineer or surveyor, or verified by the building inspector to be properly elevated. Such certification or verification shall be provided to the floodplain administrator.
- (2) New construction and substantial improvement of any residential structure in Zone AO or VO shall have the lowest floor, including basement, elevated above the highest adjacent grade as follows: at least one foot higher than the depth number specified in feet, on the FIRM, or, if no depth number is specified on the FIRM, at least three feet. Upon the completion of the structure, the elevation of the lowest floor, including basement, shall be certified by a registered professional engineer or surveyor, or verified by the community building inspector to be properly elevated. Such certification or verification shall be provided to the floodplain administrator.
- (3) All new construction or substantial improvements of nonresidential construction shall either be elevated in conformance with Section 12.2-50(C)(1), or 12.2-50(C)(2), or together with attendant utility and sanitary facilities:

(A) Be flood proofed 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 civil engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the floodplain administrator.

(4) For all new construction and substantial improvements, fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking vehicles, building access or storage, that are subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must either be certified by a registered civil engineer or architect, or meet or exceed the following minimum criteria: either a minimum of two openings on different sides 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 and the bottom of all openings shall be no higher than one foot above grade. Openings may be quipped with screens, louvers, valves, or other coverings or devices; provided, that they permit the automatic entry and exit of floodwater; and buildings with more than one enclosed area must have openings on exterior walls for each area to allow flood water to directly enter.

(5) Manufactured homes shall also meet the standards in Section 12.2-53.

(6) Attached garages.

(A) A garage attached to a residential structure, constructed with the garage floor slab below the BFE, must be designed to allow for the automatic entry of flood waters. Areas of the garage below the BFE must be constructed with flood resistant materials.

(B) A garage attached to a nonresidential structure must meet the above requirements or be dry flood proofed. For guidance on below grade parking areas, see FEMA Technical Bulletin TB-6.

(7) Detached garages and accessory structures.

“Accessory structures” used solely for parking (2 car detached garages or smaller) or limited storage (small, low-cost sheds) may be constructed such that its floor is below the base flood elevation (BFE), provided the structure is designed and constructed in accordance with the following requirements:

- (A) Use of the accessory structure must be limited to parking or limited storage;
- (B) The portions of the accessory structure located below the BFE must be built using flood-resistant materials;
- (C) The accessory structure must be adequately anchored to prevent flotation, collapse and lateral movement;
- (D) Any mechanical and utility equipment in the accessory structure must be elevated or flood proof to or above the BFE;
- (E) The accessory structure must comply with floodplain encroachment provisions in section 12.2-54; and
- (F) The accessory structure must be designed to allow for the automatic entry of flood waters in accordance with section 12.2-50(4).

Detached garages and accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in section 12.2-50.

(Ord. No. 1427, §1; Ord. No. 1506, §3; Ord. No. 1700, §10)

Sec. 12.2-51. Standards for utilities

- (a) All new replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.
- (b) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

(Ord. No. 1427, §1)

Sec. 12.2-52. Standards for subdivisions

- (a) All new subdivision proposals including manufactured home parks and subdivisions, greater than 50 lots or 5 acres, whichever is the lesser, shall identify the special flood (SFHA) hazard area and the elevation of the base flood (BFE).
- (b) All final subdivision plans will provide the elevation of proposed structure(s) and pads. If the site is filled above the base flood, the final pad elevation shall be certified by a registered civil engineer or licensed surveyor and provided as part of an application for a Letter of Map Revision based on Fill (LOMR-F) to the floodplain administrator.

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

(d) All subdivisions shall provide adequate drainage to prevent increased exposure to flood hazards.

(e) All subdivision proposals and other proposed development shall be consistent with the need to minimize flood damage.

(Ord. No. 1427, §1; Ord. No. 1700, §11)

Sec. 12.2-53. Standards for manufactured homes and recreational vehicles

(a) All manufactured homes that are placed or substantially improved, on sites located:

- (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 upon which a manufactured home has incurred "substantial damage" as the result of a flood, shall:

(A) Within Zones A1-30, AH, and AE on the community's Flood Insurance Rate Map, 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 fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

(B) Within Zones V1-30, V, and VE on the community's Flood Insurance Rate Map, meet the requirements of 12.2-55.

(b) All manufactured homes to be placed or substantially improved on sites in an exiting manufactured home park or subdivision within Zones A1-30, AH, AE, V1-30, and VE on the community's Flood Insurance Rate Map that are not subject to the provisions of section 12.2-53(a) will be securely fastened to an adequately anchored foundation system to resist flotation, collapse, and lateral movement, and be elevated so that either the:

- (1) Lowest floor of the manufactured home is at or above the base flood elevation; or

(2) 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.

(c) All recreational vehicles placed in Zones A1-30, AH, AE, V1-30, and VE will either:

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

(2) 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

(3) Meet the permit requirements of Article IV of this ordinance and the elevation and anchoring requirements for manufactured homes in section 12.2-53(a).

(4) Recreational vehicles placed on sites within Zones V1-30, V, and VE on the community's Flood Insurance Rate Map will meet the requirements of Section 12.2-53(c)(1)(2)(3) and Section 12.2-55.

(Ord. No. 1427, §1; Ord. No. 1700, §12)

Sec. 12.2-54. Floodways

Since the floodways are an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles, and erosion potential, the following provisions apply:

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

(b) If Section 12.2-54(A) is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of Article V.

(Ord. No. 1427, §1; Ord. No. 1700, §13)

Sec. 12.2-55. Coastal high hazard areas

Within coastal high hazard areas, Zones V, V1-30, and VE, as established under Section 12.2-31, the following standards shall apply:

(a) All new residential and non residential construction, including substantial improvement/damage, shall be elevated on adequately anchored pilings or columns and securely anchored to such pilings or columns so that 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. 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.

(b) All new construction and other development shall be located on the landward side of the reach of mean high tide.

(c) All new construction and substantial improvement shall have the space below the lowest floor free of obstructions or constructed with breakaway walls as defined in 12.2-20 of this ordinance. Such enclosed space shall not be used for human habitation and will be usable solely for parking of vehicles, building access or storage.

(d) Fill shall not be used for structural support of buildings.

(e) Man-made alteration of sand dunes which would increase potential flood damage is prohibited.

(f) The Floodplain Administrator shall obtain and maintain the following records:

(1) Certification by a registered engineer or architect that a proposed structure complies with 12.2-55(a); and

(2) The elevation (in relation to mean sea level) of the bottom of the lowest horizontal structural member of the lowest floor (excluding pilings or columns) of all new and substantially improved structures, and whether such structures contain a basement.

(Ord. No. 1427, §1; Ord. No. 1700, §14)

ARTICLE VI. VARIANCE AND APPEAL PROCEDURE

Sec. 12.2-60. Variance and appeal procedure

(a) The floodplain administrator shall hear and decide requests for variances from the requirements of this Chapter.

(b) Variance Procedure.

(1) Application for variances shall be filed with the floodplain administrator and shall contain a statement explaining the type of variance requested, the justification for the variance, and the hardship the applicant will suffer if the variance is not granted. The floodplain administrator may require submission of additional information necessary to make any determination required under this section.

(2) The floodplain administrator's decision granting or denying the variance shall be in writing. Findings shall be made as to each of the requirements of Section 12.2-60(E) justifying the granting or denial of the variance. Any applicant to whom a variance is granted shall be given written notice by the floodplain administrator that (i) the structure will be permitted to be built with a lowest floor elevation below the regulatory flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation, and (ii) such construction below the base flood level increases risk to life and property. A copy of the notice shall be recorded by the applicant in the office of the Solano County Assessor/Recorder and shall be indexed so that it appears in the chain of title of the affected parcel of land.

(c) The Board of Supervisors shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made by the floodplain administrator in the enforcement or administration of this Chapter.

(d) Appeal Procedure

(1) The decision of the floodplain administrator granting or denying a variance may be appealed to the board of supervisors by filing a copy of the decision and a statement of reason for the appeal with the clerk to the board of supervisors. The clerk shall set the matter for consideration by the board of supervisors and notify the floodplain administrator and applicant of the date and time of the hearing.

(2) The board of supervisors may affirm, reverse, or modify wholly or in part the decision of the floodplain administrator.

(e) In passing upon such applications, the floodplain administrator and the board of supervisors shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and:

(1) The danger that materials may be swept onto other lands to the injury of others;

(2) The danger of 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 to the facility of a waterfront location, where applicable;
 - (6) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 - (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 time of flood for ordinary and emergency vehicles;
 - (10) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters 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) Generally, variances may be issued 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, all items in Section 12.2-60 have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.
- (g) Upon consideration of the factors of Section 12.2-60 and the purposes of this Chapter, the floodplain administrator and the board of supervisors may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Chapter.
- (h) The floodplain administrator shall maintain the records of all variance and appeal actions and report any variances to FEMA.

(Ord. No. 1427, §1 Ord. No. 1700, §15)

Sec. 12.2-61. Conditions for variances

- (a) Variances may be issued for the reconstruction, rehabilitation, or restoration of structures listed in 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.

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

(c) Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief. "Minimum necessary" means to afford relief with a minimum of deviation from the requirements of this ordinance. For example, in the case of variances to an elevation requirement, this means the board of supervisors need not grant permission for the applicant to build at grade, or even to whatever elevation the applicant proposes, but only to the elevation which the board of supervisors believes will both provide relief and preserve the integrity of the local ordinance.

(d) Variances shall only be issued upon:

(1) A showing of good and sufficient cause;

(2) A determination that failure to grant the variance would result in exceptional hardship to the applicant; and

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

(e) Variances may be issued for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that the provisions of this section are satisfied and that 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.

(Ord. No. 1427, §1; Ord. No. 1506 §§1, 2, 3; Ord. No. 1700; §16)