



LAND USE SERVICES DEPARTMENT PLANNING COMMISSION STAFF REPORT

HEARING DATE: May 4, 2017

AGENDA ITEM NO: 3

PROJECT DESCRIPTION

APN:	Multiple
Applicant:	Land Use Services Department
Community:	Multiple Communities, Countywide
Location:	Countywide and all areas within the existing Floodplain Safety (FP) Overlay Areas
Project No:	P201700093
Staff:	Chris Warrick
Proposal:	A Development Code Amendment modifying the provisions relating to the Floodplain Safety (FP) Overlay in Chapter 82.14, with related amendments to Chapter 85.07, Flood Hazard Development Reviews, and Chapter 85.11, Pre-Construction Flood Hazard and Soil Erosion Pollution Prevention Inspection.

Hearing Notice Published: April 23, 2017

Report Prepared By: Chris Warrick

PROJECT DESCRIPTION

Project: This proposal is a San Bernardino County Development Code (Development Code) Amendment to modify the Floodplain Safety (FP) Overlay regulations in Chapter 82.14. For purposes of maintaining consistency throughout the Development Code, additional Chapters will also be amended, which include the Flood Hazard Development Reviews in Chapter 85.11, and Pre-Construction Flood Hazard and Soil Erosion Pollution Prevention Inspection in Chapter 85.11.

Location: The Ordinance amending the Floodplain Safety (FP) Overlay regulations will affect many areas throughout the County that are currently within the Floodplain Safety (FP) Overlay.

BACKGROUND

The County's Floodplain Safety (FP) map was originally developed by County Flood Control in the late 1960's and was intended to identify potential flood hazard areas. In 1978 The Federal Emergency Management Agency (FEMA) prepared an engineering report entitled Flood Insurance Study (FIS) for San Bernardino County and incorporated cities. The FIS has been through several updates since 1978 and includes Flood Insurance Rate Maps (FIRM's), which have been used by County agencies for several years in place of the outdated FP maps. By participating in FEMA's program, the County is required to use the FIRM maps and follow FEMA's requirements. As a result, the County's FP maps are inconsistent with the FIRM maps, and since the County is now relying on the FIRM maps as the most accurate source of information, the County's FP maps have become obsolete. Therefore, we are proposing to eliminate the Floodplain Safety (FP) areas altogether and rely solely on the FIRM maps and the regulations established by FEMA.

ANALYSIS OF PROPOSAL

Content of the Proposed Ordinance: The proposed ordinance amends Chapter 82.14 of the Development Code, entitled "Floodplain Safety (FP) Overlay". The primary purpose for the proposed Development Code amendment is that the FP Overlay was found to be outdated and inconsistent with the FEMA maps and regulations, which have been adopted and consistently utilized by the County for several years. Below are the principal changes to the Floodplain ordinance:

- **Chapter 82.14** – Eliminates obsolete floodplain mapping and includes updated FEMA flood zone language.
- **Chapter 85.07** – Eliminates Flood Hazard Development Review. This process existed when the Land Development Division was still part of the Department of Public Works. Now that Land Development is part Land Use Services, the Flood Hazard Development Review is no longer required.
- **Chapter 85.11** – Eliminates the Pre-Construction Inspection Report. Building and Safety is no longer offering this service, as it is incorporated into the erosion control process. Also includes updated erosion control language.

Role of the Planning Commission: The Planning Commission is appointed by the Board of Supervisors (Board) to consider matters of planning, zoning, land use and development. The Development Code contains County planning, zoning, land use and development regulations adopted by the Board, with recommendations from the Planning Commission. The County's Floodplain Safety regulations related to land use and development are regulated by the Development Code, and therefore require a recommendation from the Planning Commission.

ENVIRONMENTAL DETERMINATION

The Proposed Development Code Amendment is exempt from the California Environmental Quality Act (CEQA) because the proposed amendment is consistent with the Federal Emergency Management Agency (FEMA) maps and regulations and continues to protect public health and safety. As such, there is no possibility that the activity in question may have a significant effect on the environment, pursuant to section 15061(b)(3) of the CEQA Guidelines.

FINDINGS

The following findings and the evidence to support such findings must be made by the Planning Commission in its recommendation to the Board of Supervisors to approve the proposed Development Code Amendment:

1. The proposed ordinance amending the Development Code is consistent with the General Plan and any applicable community plan or specific plan because the ordinance will provide consistency with the FEMA maps and regulations, which have been adopted and consistently utilized by the County for several years. The proposed Floodplain Safety (FP) Overlay ordinance will continue to protect public health and safety, consistent with the following excerpts from the Countywide Vision and the General Plan:

We envision a sustainable system of high-quality education, community health, public safety, housing, retail, recreation, arts and culture, and infrastructure, in which development complements our natural resources and environment.

GOAL S 5: **The County will provide adequate flood protection to minimize hazards and structural damage.**

POLICY S 5.1: Participate in the National Flood Insurance Program (NFIP), which provides flood insurance within designated floodplains.

Programs: 1. Designate Floodway and Floodplain areas, as identified by the Federal Emergency Management Agency (FEMA) on flood insurance rate maps and flood boundary maps, as Floodway

(FW) on the Land Use Maps and Floodplain Overlays on the Hazards Overlay Maps.

POLICY S 5.2: Update data and maps with newly identified flood hazard areas in the County, as new information becomes available.

Programs:

1. Initiate and finance programs for the continuous evaluation and designation of floodway, floodplain, and drainage areas.
2. Timely application for FEMA mapping changes will be initiated to reflect any additions to or alterations in identified Floodways or Floodplains by the County Floodplain Management Administrator.
3. Adopt the FEMA Digital Flood Insurance Rate Map database as published by FEMA as it currently exists and as updated in the future for the County allowing for automatic map updates as new data are published by FEMA.

2. The proposed ordinance amending the Development Code would not be detrimental to the public interest, health, safety, convenience, or welfare of the County. The ordinance is proposed with the express purpose of ensuring consistency with the FEMA maps and regulations and to eliminate the inconsistencies between the County's Floodplain mapping and FEMA's Flood Insurance Rate Maps.
3. The proposed ordinance amending the Development Code is internally consistent with other applicable provisions of the Development Code. For purposes of maintaining consistency throughout the Development Code, additional Chapters will also be amended, which include the Flood Hazard Development Reviews in Chapter 85.11, and Pre-Construction Flood Hazard and Soil Erosion Pollution Prevention Inspection in Chapter 85.11.
4. The proposed amendment is exempt from the requirements of CEQA pursuant to state CEQA Guidelines §15061(b)(3) because it can be determined that implementation of the proposed ordinance would not have a significant effect on the environment.

RECOMMENDATION

Staff recommends that the Planning Commission recommend the following actions to the Board of Supervisors:

- A. **ADOPT** the proposed Ordinance amending Title 8 of the County Code (Development Code) modifying certain provisions relating to the Floodplain Safety (FP) District in Chapter 82.14, with related amendments to Chapter 85.07, Flood Hazard Development Reviews, and Chapter 85.11, Pre-Construction Flood Hazard and Soil Erosion Pollution Prevention Inspection.
- B. **ADOPT** the findings as contained in the staff report.
- C. **FILE** the Notice of Exemption.

ATTACHMENTS

Exhibit A: Proposed County Development Code Section Changes (Red-lined Version)

EXHIBIT A

Proposed County Development Code Section Changes (Red-lined Version)

CHAPTER 82.14 FLOODPLAIN SAFETY (FP) OVERLAY**Sections:**

82.14.010	Purpose
82.14.020	Location Requirements
82.14.030	Applicability
82.14.040	<u>Floodplain Safety Review Areas</u>
82.14.050	Development Standards <u>for Projects within FP1 and FP2 the Floodplain Safety Review Areas</u>
82.14.060	Exceptions and Modifications
82.14.070	Boundary Changes

82.14.010 Purpose

The Floodplain Safety (FP) Overlay established by Sections 82.01.020 (Land Use Plan and Land Use Zoning Districts) and 82.01.030 (Overlays) is created to provide greater public safety, promote public health, and minimize public and private economic losses due to flood conditions by establishing regulations for development and construction within flood prone areas.

Adopted Ordinance 4011 (2007); Amended Ordinance 4067 (2009); Amended Ordinance 4163 (2012)

82.14.020 Location Requirements

- (a) The ~~FP1, FP2, and FP3~~ Floodplain Safety Overlays Areas described in Section 82.14.040 [Floodplain Safety Review Areas] are applied to areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) or the Federal Insurance Administration in a scientific and engineering report entitled "Flood Insurance Study for San Bernardino County, California and Incorporated Areas," initially prepared in 1978, which has subsequent updates, with accompanying Flood Insurance Rate Maps (FIRMs). Subsequent report and map updates that may be published in the future shall further identify additional flood hazard areas or areas, as in the case of FP3, are areas designated by the County Flood Control District that are areas of undetermined, but possible, shallow flooding. The most current copies of the Flood Insurance Study (FIS) and the Flood Insurance Rate Maps (FIRMs) are on file at the Department of Public Works.
- (b) FIS establishes the minimum areas to which the FP Overlays may be applied. Additional areas may be added after studies for the areas are prepared by the Flood Control District or other governmental agencies (e.g., Corps of Engineers).

Adopted Ordinance 4011 (2007); Amended Ordinance 4067 (2009); Amended Ordinance 4163 (2012); Amended Ordinance XXXX (2017)

82.14.030 Applicability

No structure or land use shall hereafter be constructed, located, extended, converted, or altered without full compliance with the provisions of this Chapter and other applicable regulations. Violations of the provisions of this Chapter by failure to comply with any of its requirements (including violation of conditions and safeguards required by conditions of approval) shall be subject to the penalties established by this Development Code. Nothing in this Chapter shall prevent the County from taking lawful action as is necessary to prevent or remedy any violation.

- (a) **Abrogation and greater restrictions.** The provisions of this Chapter are not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions or any map changes made by FEMA. However, where this Chapter or other section, easement, covenant, or deed restriction or map revision as may be made by FEMA conflict or overlap, the more stringent regulations or standards shall govern.
- (b) **Interpretation.** In the interpretation and application of this Chapter all provisions shall be considered as minimum requirements, liberally construed in favor of the governing body and, deemed neither to limit nor repeal any other powers granted under state statutes.
- (c) **Implementation.** The requirements of this Section shall be integrated into the processing and review of all land use applications and development permits where specific flood hazard review and flood protection recommendations are made by the County.

(d) **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. These regulations do not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. These provisions shall not create liability on the part of the County, any officer or employee thereof, the State of California, or the Federal Emergency Management Agency, for any flood damages that result from reliance on these regulations or any administrative decision lawfully made hereunder.

Adopted Ordinance 4011 (2007); Amended Ordinance 4067 (2009); Amended Ordinance 4098 (2009); Amended Ordinance 4163 (2012); Amended Ordinance 4254 (2014)

82.14.040 Floodplain Safety Review Areas

The Floodplain Safety Overlay (FP) shall be subdivided into ~~three review~~flood hazard zone areas as follows. Proposed development shall comply with the following requirements.

- (a) ~~Floodplain Safety Review Area 1 – (FP1)~~100-year floodplain. ~~FP1~~The 100-year floodplain includes areas subject to a base flood (also called “100-year flood”) as defined by the Federal Flood Insurance Regulations. The following are the FEMA-designated flood hazard zones ~~are included in FP1~~for this area: A, AE, AH, A1-30 and AO. (Note:

FEMA-designated regulatory floodway is included within the AE zone.) The following standards shall apply to property within these ~~zones~~ FP1 area.

- (1) **Elevation of first floor.** New construction and substantial improvement of any structure shall be constructed so that the first floor (including basement) shall be one foot or more above the base flood elevation, when the FEMA map base flood elevations are shown, and will not result in any significant increase in flood levels during a base flood discharge. When the base flood elevations are not shown, new construction and substantial improvement of any residential structure shall be constructed so that the first floor (including basement) shall be two feet or more above the highest adjacent grade.
 - (2) **Review procedures.** A project proposed in this area shall be subject to a ~~Flood Hazard Development Review and/or a Floodplain Development Standards Review~~. These reviews shall ensure that the proposed project complies with this Development Code regarding flood protection measures and shall require the submittal of an Elevation Certificate completed by a licensed land surveyor, registered civil engineer, or architect who is authorized by State or local law to certify elevation information.
 - (3) **Development Restriction.** In areas where no regulatory floodway has been designated by FEMA, new construction, substantial improvement or other development (including fill) shall not be permitted within any areas designated by FEMA as A, A1-30, AO, AH, or AE on the FIRMs, unless it is demonstrated that the cumulative effect of the proposed development when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community.
 - (4) **FEMA-Designated Floodways.** Floodways, as defined by FEMA, are different from the Floodway Land Use Zoning District established in Chapter 82.01 [Land Use Plan, Land Use Zoning Districts, and Overlays] and regulated by Chapter 82.03 [Agriculture and Resource Management Land Use Zoning Districts] of this Title. They are defined as the channels 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. They are also referred to as "Regulatory Floodways" [see Subsection 810.01.080(ff)(25)]. They are generally coterminous with the County's Floodway Land Use Zoning Districts. They are considered FEMA-designated flood hazard zones in that they are included within the AE zone. and thereby included within the FP1 (Floodplain Safety Review Area 1).
- (b) **Floodplain Safety Review Area 2 (FP2) 100 to 500-year floodplain.** ~~FP2~~ This area includes areas between limits of the base flood (100-year flood) and a 500-year flood; and certain areas subject to 100-year flooding with an average depth of less than one foot or where the contributing drainage areas are less than one square mile; or areas protected by levees from the base flood. The following are the FEMA-designated flood hazard zones

are included in FP2 for this area: A-99 and the shaded Zone X. The following standards shall apply to property within these zones FP2 area.

- (1) **Elevation of first floor.** New construction and substantial improvement of any structure shall be so constructed that the first floor (including basement) shall be one foot above the highest adjacent grade.
 - (2) **Review procedures.** A project proposed in this area shall be subject to a Floodplain Development Standards Review conducted by the Building and Safety Division and may be subject a Flood Hazard Development Review based upon the determination by the Drainage Section of Land Development Division of the Land Use Services Department, of Public Works. This review shall ensure that the proposed project complies with this Development Code regarding flood protection measures. and will require the submittal of an Elevation Certificate completed by a licensed land surveyor, registered civil engineer, or architect who is authorized by State or local law to certify elevation information.
- (c) **Floodplain Safety Review Area 3 (FP3) Undetermined flood hazards.** FP3-This area includes areas of undetermined, but possible, shallow flooding as determined by the County, the Flood Control District, or other governmental agency. The following standards shall apply to property within the FP3 this area:
- ~~(1) **Field investigation required.** Before a building permit can be issued on any affected lot, a field investigation shall be made of the lot to determine if the proposed construction will have any substantial detrimental effect on the drainage way. An applicant for the building permit on an affected lot shall first apply for the required field investigation and shall pay the appropriate fee. The following shall be included in the application for field investigation:~~
 - ~~(A) A corner record, record of survey, parcel map, final map, or a past survey that is approved by the County Surveyor as being in conformance with the Land Surveyors Act shall be submitted.~~
 - ~~(B) A plot plan showing the proposed structures and grading by size, location and orientation.~~
 - (1) **Final building plan content.** The final building plans that are submitted for approval shall show the approved location and mitigating measures.
 - (2) **Development Standards.** Development Standards for the FP3 Floodplain Safety Undetermined flood hazard Review Area shall be determined on a case-by-case and shall be dependent upon the specific of the project. A Flood Hazard Development Review or a Floodplain Development Standards Review may be required.

Adopted Ordinance 4011 (2007); Amended Ordinance 4067 (2009); Amended Ordinance 4163 (2012); Amended Ordinance XXXX (2017)

82.14.050 Development Standards for Projects within FP1 and FP2 Floodplain Safety Review Areas

- (a) **Anchoring.** All new construction and substantial improvements of structures, including manufactured homes, shall be anchored to the foundation to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. If a structure is elevated on fill as specified in Subsection 82.14.050(c), and 82.14.050(d)(1), the anchoring requirement shall be satisfied. Other alternative anchoring techniques that are effective may be considered.
- (b) **Construction materials and methods.** All new construction and improvements of structures whether substantial or not, including manufactured homes, shall be constructed:
- (1) With materials and utility equipment installed below the base flood elevation or the highest adjacent grade that are resistant to flood damage. This would include but not be limited to water resistant lumber, floor coverings, adhesives, paints, masonry construction and finishes, water proof electrical systems, and mechanical footings, or other acceptable materials measures. (See FEMA Technical Bulletin TB 2-93.)
 - (2) Using methods and practices that minimize flood damage. This would include but not be limited to elevating the structure, aligning the structure to be parallel with water flow, increasing the structural designs to withstand hydrologic and hydrographic sources, and increasing the depth of footings.
 - (3) 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) So that adequate drainage paths are provided around structures on slopes to guide flood waters around and away from proposed structures.
- (c) **Grading.** If fill is placed to elevate pads above base elevation, it must be demonstrated that fill will not settle and is protected from erosion, scour, or differential settlement, as follows.
- (1) The pad elevation shall be certified to meet or exceed the elevation required by the applicable Floodplain Safety Review Area, and it must be demonstrated that the cumulative effect of the proposed development when combined with all other existing and anticipated development will not increase the water surface elevation of the base flood more than one foot at any point within the community.
 - (2) Fill shall be compacted to 95 percent per ASTM (American Society of Testing Materials) Standard D-698.
 - (3) Fill slopes shall be no steeper than two feet horizontal to one foot vertical ratio unless substantiating data for steeper slopes is provided, and the slopes are approved by the County.

- (4) Fill slopes adjacent to a water course may be required to be armored with stone, rock or approved equal protection.

(d) Elevation and flood-proofing.

(1) Residential Structures. New construction and substantial improvement of any residential structure shall include having the lowest floor (including basement), elevated to one foot above base flood elevation or two feet or more above the highest adjacent grade in the FP1-100-year floodplain area, and one foot above highest adjacent grade in the FP2-100 to 500-year floodplain area. Upon completion of the structure, the elevation of the lowest floor (including basement) shall be certified by a registered civil engineer or licensed land surveyor to be properly elevated above the floodplain elevation at the time of certification. The certification shall be provided on the current FEMA Elevation Certificate form to the Building Official. In accordance with FEMA regulations (Substantial Improvement & Substantial Damage), the following shall apply relative to existing residential structures and substantial improvements:

- (A) If the cost of a rehabilitation or addition is not a substantial improvement, the existing building does not have to be elevated or otherwise protected. However, it is advisable to incorporate methods to reduce flood damage, such as use of flood-resistant materials and installation of electrical, heating and air conditions units above the base flood elevation.
- (B) If the cost of a rehabilitation is a substantial improvement, the existing building shall be elevated and/or the basement filled to meet the elevation standard.
- (C) If an addition to a structure is a substantial improvement, the addition must be elevated or flood-proofed, providing that improvements to the existing structure are minimal. The existing structure may not have to be elevated if the common wall remains intact with the exception of a doorway. If the structure is within any A Zone and if substantial improvements are made to the existing structure (such as a kitchen makeover), both the existing structure and the addition must be elevated and otherwise brought into compliance.
- (D) When a proposed substantial improvement is a vertical addition and the lower floor is to be used for any other purpose than a garage for the parking of private passenger vehicles, the entire structure must be elevated.
- (E) Additions that are not substantial improvements shall meet the applicable requirements of Subsection 82.14.050(b) above.

(2) Nonresidential Construction. Nonresidential construction shall be either elevated in compliance with Subsection (d)(1) of this Section or be dry flood-proofed. Dry flood-proofing shall consist of all of the following:

- (A) The area below the base flood level, together with attendant utility and sanitary facilities, shall be constructed so that the structure is watertight with walls substantially impermeable to the passage of water;
 - (B) The structural components shall be capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
 - (C) The structure shall 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.
- (3) Flood Openings.** In addition to the provisions of 82.14.050(d)(1) and (2) above, a ll new construction and improvements to existing structures with fully enclosing structural areas below the lowest floor (excluding basements) that are used solely for parking of vehicles, building access or storage, and 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 floodwaters. Designs for meeting this requirement must meet the following minimum criteria:
- (A) For non-engineered openings, have 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. The bottom of all openings shall be no higher than one foot above grade. Openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters. Also, buildings with more than one such enclosed area must have openings on exterior walls for each area to allow flood water to directly enter and exit; or
 - (B) Be certified by a registered civil engineer or an architect. This certification must be verified by the Floodplain Administrator.
 - (C) Flood openings may not be appropriate on alluvial fans or high debris flow areas (i.e. alluvial fans) and are subject to review and approval by the appropriate County reviewing agency. Structural calculations that address hydrostatic and hydrodynamic loading shall be submitted by the applicant as part of this approval process.
- (4) Garages and low cost accessory structures.**
- (A) **Attached garages.**
 - (I) A garage attached to a residential structure, constructed with the garage floor slab below the base flood elevation, must be designed to allow for the automatic entry of flood waters. Areas of the garage below the base flood elevation must be constructed with flood resistant materials.

(II) 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.)

(B) Detached garages and accessory structures.

(I) “Accessory structures” used solely for parking (two-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, provided the structure is designed and constructed in accordance with the following requirements:

(i) Use of the accessory structure must be limited to parking or limited storage;

(ii) The portions of the accessory structure located below the base flood elevation must be built using flood-resistant materials;

(iii) The accessory structure must be adequately anchored to prevent flotation, collapse and lateral movement;

(iv) Any mechanical and utility equipment in the accessory structure must be elevated or flood-proofed to or above the base flood elevation;

(v) The accessory structure must comply with floodplain encroachment provisions in Subsection 82.14.050(g)(1) below; and

(vi) The accessory structure must be designed to allow for the automatic entry of flood waters in accordance with Subsection 82.14.050(d)(3)(C) above.

(II) Detached garages and accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in this Section and to the elevations required by the Floodplain Safety Area in which it is located.

(5) Crawl Space Construction. This subsection applies to buildings with crawl spaces up to two feet below grade. Below-grade crawl space construction in accordance with the requirements listed below will not be considered basements.

(A) The building must be designed and adequately anchored to resist flotation, collapse, and lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Crawl space construction is not allowed in areas with flood velocities greater than five feet per second unless the design is reviewed by a qualified design professional, such as a registered architect or civil engineer;

- (B) The crawl space is an enclosed area below the base flood elevation and, as such, must have openings that equalize hydrostatic pressures by allowing for the automatic entry and exit of floodwaters. (For guidance on flood openings, see FEMA Technical Bulletins 11-01 and 1-08);
- (C) Portions of the building below the base flood elevation must be constructed with materials resistant to flood damage. This includes not only the foundation walls of the crawl space used to elevate the building, but also any joists, insulation, or other materials that extend below the base flood elevation; and
- (D) Any building utility systems within the crawl space must be elevated above base flood elevation or designed so that floodwaters cannot enter or accumulate within the system components during flood conditions.
- (E) Requirements for all below-grade crawl space construction, in addition to the above requirements, to include the following:
 - (I) The interior grade of a crawl space below the base flood elevation must not be more than two feet below the lowest adjacent exterior grade;
 - (II) The height of the below-grade crawl space, measured from the interior grade of the crawl space to the top of the crawl space foundation wall must not exceed four feet at any point;
 - (III) There must be an adequate drainage system that removes floodwaters from the interior area of the crawl space within a reasonable period of time after a flood event, not to exceed 72 hours; and
 - (IV) The velocity of floodwaters at the site should not exceed five feet per second for any crawl space. For velocities in excess of five feet per second, other foundation types should be used.

(e) Utility standards.

- (1) All new and 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.
- (2) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- (3) All public utilities and facilities such as electrical, telephone, cable TV, gas etc., shall utilize floodproofing measures in their location and construction to minimize flood damage. They shall be adequately anchored to prevent flotation, collapse or lateral movement of the facility resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

- (f) **Design requirements.** All development proposals, including subdivisions, shall comply with the following requirements:
- (1) All preliminary proposals shall identify the special flood hazard area and the elevation of the base flood.
 - (2) All final plans shall provide the elevation of proposed structures and pads above the floodplain elevation as derived from the FEMA map adopted at the time of certification. If the site is filled above the base flood, the final pad elevation shall be certified by a registered civil engineer or licensed land surveyor and shall be submitted to the Floodplain Administrator. The entire site need not be elevated; only the building pads need be elevated and other means of conducting storm flows through the site shall be provided.
 - (3) All proposals shall be consistent with the need to minimize flood damage.
 - (4) All proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
 - (5) All proposals shall provide adequate drainage to reduce exposure to flood hazards and not deflect flood flows onto other properties.
- (g) **Manufactured homes.** All new and replacement manufactured homes and additions to manufactured homes shall comply with all applicable provisions this Section in addition to the following:
- (1) Elevations.
 - (A) Within Zones A1-30, AO, AH, and AE of the ~~FP1-100-year~~ Floodplain Safety Review Area, all manufactured homes shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to one foot or more above the base flood elevation; or
 - (B) Within Zone A₂ ~~of the FP1 Floodplain Safety Review Area~~, all manufactured homes shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to two feet or more above the highest adjacent grade; or
 - (C) Within the ~~FP2-100 to 500-year~~ Floodplain Safety Review Area, all manufactured homes shall be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to one foot or more above the highest adjacent grade.
 - (2) All manufactured homes shall be securely anchored to a permanent foundation system to resist flotation, collapse or lateral movement. Methods of anchoring shall

include, but not be limited to, the use of over-the-top or frame ties to ground anchors.

- (3) Upon the completion of the structure, the elevation of the lowest floor including basement shall be certified by a registered civil engineer or licensed land surveyor, and verified by the Floodplain Administrator.

(h) Floodway standards. FEMA-designated floodways are extremely hazardous areas due to the velocity of flood waters that carry debris, potential projectiles, and erosion potential, therefore, the following provisions apply:

- (1) Encroachments, including fill, new construction, substantial improvements, stockpiling, and other development are prohibited unless certification by a registered civil engineer or architect is provided, demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- (2) If Subsection 82.14.050(g)(1) above is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of this Chapter.

(i) Recreational Vehicles. All recreational vehicles placed in an FP+the 100-year floodplain Overlay area will:

- (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 Section 82.14.030 and the elevation and anchoring requirements for manufactured homes in Subsection 82.14.050(g)

Adopted Ordinance 4011 (2007); Amended Ordinance 4067 (2009); Amended Ordinance 4163 (2012); Amended Ordinance 4254 (2014); Amended Ordinance XXXX (2017)

82.14.060 Exceptions and Modifications

- (a) Exceptions.** The following structures and land uses are exempt from the requirements and standards established by this Chapter.
 - (1) The reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or a State Inventory of Historic Places upon a determination by the Director that the proposed repair or rehabilitation will not preclude the structure's continued designation as an historic structure and the

exception is the minimum necessary to preserve the historic character and design of the structure.

(2) Replacement of utilities, including septic systems, in compliance with health and safety codes shall be exempt from the flood elevation requirements of this Development Code and shall otherwise be subject to the legal non-conforming use provisions of this Development Code.

(3) Structures of such a minor nature that they are exempt from development permits, provided it can be demonstrated that there is no effect contrary to the intent and purpose of the County's floodplain regulations.

(b) **Modifications.** In the public interest, the Building Official or the Floodplain Administrator may, without notice or public hearing, approve, conditionally approve, deny or refer to the Commission requests to modify the requirements of the Floodplain Safety (FP) Overlay.

(1) **Procedure.** Written application (either Major Variance or Minor Variance) for such modifications shall be submitted to the Planning Division, upon the forms provided by the County for this purpose.

(2) **Required findings.** A modification to the standards imposed by this Chapter shall be allowed subject to lawful conditions that will secure substantial protection for the public health, safety and general welfare and provided that all of the following be found and justified as being true:

(A) The modification, if within any designated regulatory floodway, will not result in any significant increase in flood levels during the base flood discharge.

(B) The modification is for new construction or substantial improvement, and other proposed new development 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 that the procedures of this Chapter have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.

(C) The granting of the modification will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud or victimization of the public or conflict with existing laws or ordinances.

(D) The modification is the minimum necessary, considering the flood hazard, to afford relief and is consistent with the objectives of sound floodplain management.

(c) **Written Notification.** Any applicant to whom an exception is granted shall be given written notice:

- (1) The issuance of an exception to construct a structure below the base flood level will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and
- (2) Such construction below the base flood level increases risks to life and property. A Notice of Condition shall be recorded by the Floodplain Administrator in the Office of the County Recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land.

Adopted Ordinance 4011 (2007); Amended Ordinance 4067 (2009); Amended Ordinance 4163 (2012)

82.14.070 Boundary Changes

An applicant may apply to FEMA for an adjustment to the designated Base Flood elevation and/or other designations on the FIRM. Prior to submitting such application to FEMA, all required documents required by FEMA must be submitted to the Flood Control District for review and acknowledgement. Depending on the size, scope and specific design a land use proposal within the County, an applicant for such proposal may be required to submit an application to FEMA for an adjustment to the base flood elevation. The Department of Public Works will determine if this FEMA application is actually required.

Adopted Ordinance 4011 (2007); Amended Ordinance 4067 (2009); Amended Ordinance 4163 (2012)

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