

Chapter 16.50 (Flood Damage Prevention) shall be added as follows:

**Chapter 16.50
Flood Damage Prevention**

Sections:

16.50.010	Purpose and Intent
16.50.020	Definitions
16.50.030	Administration
16.50.040	General Provisions
16.50.050	Development Permit
16.50.060	Provisions for Flood Hazard Reduction

16.50.010 Purpose and Intent

It is the purpose of this chapter to enact regulations applied uniformly throughout the community to all publicly and privately owned land within flood-prone areas. These regulations are designed to:

- Protect human life and health;
- Minimize expenditure of public money for costly flood control projects;
- Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- Minimize prolonged business interruptions;
- Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone, and sewer lines; and streets and bridges located in areas of special flood hazard;
- Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;
- Ensure that potential buyers are notified that property is in an area of special flood hazard; and
- Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions.

The City's intent in adopting this chapter is to provide floodplain management regulations, as authorized under Government Code §§65302, 65560, 65800, and similar sections.

16.50.020 Definitions

For the purposes of this chapter, the following terms, phrases, and words shall have the following definitions:

A. "A" Definitions

1. A Zone. See definition for Special Flood Hazard Area (SFHA).
2. "Accessory Building" means an accessory building as defined in EGMC Title 23.
3. "Accessory Building, Small" means an accessory building, as defined in EGMC Title 23, with an enclosed space of less than one hundred twenty (120) square feet.
4. "Accessory Structure" means an accessory structure as defined in EGMC Title 23.
5. "Accessory Use" means a use which is incidental and subordinate to the principal use of the parcel of land on which it is located.
6. "Alluvial Fan" means a geomorphologic feature characterized by a cone or fan-shaped deposit of boulders, gravel, and fine sediments that have been eroded from mountain slopes, transported by flood flows, and then deposited on the valley floors, and which is subject to flash flooding, high-velocity flows, debris flows, erosion, sediment movement and deposition, and channel migration.
7. "Apex" means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.
8. "Appeal" means a request for a review of the Floodplain Administrator's interpretation of any provision of this chapter.
9. "Area of Shallow Flooding" means a designated AO or AH Zone on the Flood Insurance Rate Map (FIRM). The base flood depths range from one (1) to three (3) 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.
10. "Area of Special Flood Hazard" shall mean an area designated as a Special Flood Hazard Area (SFHA).

B. "B" Definitions

1. "Base Flood" means a flood which has a one percent (1%) chance of being equaled or exceeded in any given year (also called the 100-year flood). Base flood is the term used throughout this chapter.
2. "Base Flood Elevation" (BFE) means the elevation shown on the Flood Insurance Rate Map for Zones AE, AH, and A1-30 that indicate the water surface elevation resulting from a flood that has a one percent (1%) or greater chance of being equaled or exceeded in any given year.

3. “Basement” means any area of the building having its floor subgrade (i.e., below ground level) on all sides.
 4. “Building” means a building as defined in EGMC Title 23.
- C. “C” Definitions
1. “City Council” means the City Council of the City of Elk Grove.
- D. “D” Definitions
1. “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 or materials.
- E. “E” Definitions
1. “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.
 2. “Existing Manufactured Home Park or Subdivision” means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) was completed before the effective date of the ordinance codifying this Chapter.
 3. “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).
- F. “F” Definitions
1. “Flood, Flooding, or Flood Water” means:
 - i. A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of inland waters and the unusual and rapid accumulation or runoff of surface waters from any source; and
 - ii. The condition resulting from flood related erosion.
 2. “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 special flood hazards and the floodway.
 3. “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.

4. "Flood Insurance Study" means the official report provided by the Federal Insurance Administration that may include flood profiles, the Flood Insurance Rate Map, the Flood Boundary and Floodway Map, and the base flood elevation.
 5. "Floodplain or Flood-Prone Area" means any land area susceptible to being inundated by water from any source. See "flood, flooding, or flood water."
 6. "Floodplain Administrator" means the Public Works Director, or their designee, who is tasked with enforcing the floodplain management regulations.
 7. "Floodplain Management" means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing, where possible, natural resources in the floodplain, including but not limited to emergency preparedness plans, flood control works, floodplain management regulations, and open space plans.
 8. "Floodplain Management Regulations" means this chapter and other regulations in this Municipal Code, subdivision regulations, building codes, health regulations, special purpose regulations (such as grading and erosion control), and other application of police power which control development in flood-prone areas. This term describes federal, state, or local regulations in any combination thereof which provide standards for preventing and reducing flood loss and damage.
 9. "Flood-proofing" means any combination of structural and nonstructural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents. For guidelines on dry and wet flood-proofing, see FEMA Technical Bulletins TB 1-93, TB 3-93, and TB 7-93.
 10. "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 (1'). Also referred to as regulatory floodway.
 11. "Floodway Fringe" means that area of the floodplain on either side of the regulatory floodway where encroachment may be permitted.
- G. "G" Definitions. Reserved for future use.
- H. "H" Definitions.
1. "Habitable Structure" means any structure that is designed to be lived in or otherwise occupied for extended periods of time. Examples include, but are not limited to, residential units (single family residences, apartments), commercial space, office space, or other similar areas with conditioned space.
 2. "Highest Adjacent Grade" means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

- I. "I" Definitions. Reserved for future use.
- J. "J" Definitions. Reserved for future use.
- K. "K" Definitions. Reserved for future use.
- L. "L" Definitions.
 - 1. "Local Hazard Mitigation Plan" means a plan that incorporates a process whereby the potential of future loss due to flooding can be minimized by planning and implementing one or more alternatives to floodplain management on a community-wide basis.
 - 2. "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.
 - 3. "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.
 - 4. "Lowest Floor" means the lowest floor of the lowest enclosed area, including basement (see "basement"). An unfinished or flood-resistant enclosure below the lowest floor that is 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:
 - i. The anchoring standards in EGMC Subsection 16.50.060(A)(1) (Anchoring);
 - ii. The construction materials and methods standards in EGMC Subsection 16.50.060.A.2 (Construction Materials and Methods);
 - iii. The flood openings standard in EGMC Subsection 16.50.060(A)(3)(iii) (Flood Openings); and
 - iv. The standards for utilities in EGMC Subsection 16.50.060(B) (Standards for Utilities).

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

- M. "M" Definitions.
 - 1. "Manufactured Home" 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 attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."
 - 2. "Manufactured Home Park or Subdivision" means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.
 - 3. "Market Value" means the value as determined by estimating the cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation

which has accrued since the structure was constructed. The cost of replacement of the structure shall be based on a square foot cost factor determined by reference to a building cost estimating guide recognized by the building construction industry. The amount of depreciation shall be determined by taking into account the age and physical deterioration of the structure and its functional obsolescence, as approved by the Floodplain Administrator, but shall not include economic or other forms of external obsolescence. Use of replacement costs or accrued depreciation factors different from those contained in recognized building cost estimating guides may be considered only if such factors are included in a report prepared by an independent professional appraiser and supported by a written explanation of the differences.

4. “Mean Sea Level”, for purposes of the National Flood Insurance Program, means 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.

N. “N” Definitions.

1. “New Construction”, for floodplain management purposes, means structures for which the “start of construction” commenced on or after the effective date of the ordinance codifying this Chapter, and includes any subsequent improvements to such structures.
2. “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) was completed on or after the effective date of the ordinance codifying this Chapter.
3. “Non-habitable Accessory Structure” means a structure that is not designed to be lived in or otherwise occupied for long durations. Examples include, but are not limited to, garages, storage sheds, barns, carports, gazebos, patio covers, arbors, and play equipment.

O. “O” Definitions.

1. “Obstruction” means, 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.
2. “One Hundred (100) Year Flood” means as provided in the term “Base Flood”.

P. "P" Definitions.

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

Q. "Q" Definitions. Reserved for future use.

R. "R" Definitions.

1. "Recreational Vehicle" means a vehicle which is:
 - i. Built on a single chassis;
 - ii. Four hundred (400) square feet or less when measured at the largest horizontal projection;
 - iii. Designed to be self-propelled or permanently towable by a light-duty truck; and
 - iv. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.
2. "Regulatory Floodway" means the channel of a river or other watercourse and the adjacent land areas, as determined by FEMA, that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot (1').
3. "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 physically possible due to site conditions, to reduce the impacts of its noncompliance to a level deemed acceptable to the City. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of the chapter or otherwise deterring future similar violations, or reducing state or federal financial exposure with regard to the structure or other development.
4. "Riverine", as relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

S. "S" Definitions.

1. "Sheet Flow Area" means as provided in the term Shallow Flooding.
2. "Special Flood Hazard Area" (SFHA) means an area in the floodplain subject to a one percent (1%) or greater chance of flooding in any given year. It is shown on an FHBM or FIRM as Zone A, AO, A1 A30, AE, A99, or AH.
3. "Start of Construction" means the date the building permit was issued for substantial improvement and other proposed new development, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within one hundred eighty (180) days from the date of the permit. 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 stage of excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading, and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for a basement, footings, piers, or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. 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.

4. “Structure” means a structure as defined in EGMC Title 23.
 5. “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 fifty percent (50%) of the market value of the structure before the damage occurred.
 6. “Substantial Improvement” means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure before the start of construction of the improvement. This term includes structures which have incurred “substantial damage,” regardless of the actual repair work performed. The term does not, however, include either:
 - i. Any project for improvement of a structure to correct existing violations or state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
 - ii. Any alteration of a historic structure, provided that the alteration will not preclude the structure’s continued designation as a historic structure.
- T. “T” Definitions. Reserved for future use.
- U. “U” Definitions. Reserved for future use.
- V. “V” Definitions.
1. “Violation” means the failure of a structure or other development to be fully compliant with this chapter. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this chapter is presumed to be in violation until such time as that documentation is provided.
- W. “W” Definitions.
1. “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 riverine areas.

2. "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.
- X. "X" Definitions. Reserved for future use.
- Y. "Y" Definitions. Reserved for future use.
- Z. "Z" Definitions. Reserved for future use.

16.50.030 Administration

- A. **Designation of the Floodplain Administrator.** The Public Works Director, or their designee, is hereby appointed to administer, implement, and enforce this chapter.
- B. **Duties and Responsibilities of the Floodplain Administrator.** The duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:
 1. Permit Review. Review all development permits to determine that:
 - i. Permit requirements of this chapter have been satisfied.
 - ii. All other required state and federal permits have been obtained.
 - iii. The proposed development or encroachment 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 (1') at any point within the City.
 - iv. Any necessary letters of map revision (LOMRs) are approved prior to the issuance of building permits. Building permits must not be issued based on conditional letters of map revision (CLOMRs). Approved CLOMRs allow construction and land preparation as specified in the start of construction definition.
 2. Development of Substantial Improvement and Substantial Damage Procedures
 - i. Using FEMA publication FEMAP-758, "Substantial Improvement/Substantial Damage Desk Reference," develop detailed procedures for identifying and administering requirements for substantial improvement and substantial damage, to include defining market value.
 - ii. Assure procedures are coordinated with other departments/divisions and implemented by City staff.
 3. Determine when substantial progress has been made on flood control projects for local projects relative to EGMC Section 23.42.040 (Flood Combining District).
 4. Review, Use, and Development of Other Base Flood Data. When base flood elevation data has not been provided in accordance with EGMC Subsection 16.50.040(B) (Basis

For Establishing the Areas of Special Flood Hazard), the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal or state agency, or other source, in order to administer EGMC Section 16.50.060 (Provisions for Flood Hazard Reduction).

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.

5. Notification of Other Agencies
 - i. Alteration or relocation of a watercourse:
 1. Notify adjacent communities and the California Department of Water Resources prior to alteration or relocation;
 2. Submit evidence of such notification to FEMA; and
 3. Assure that the flood-carrying capacity within the altered or relocated portion of said watercourse is maintained.
 - ii. Base flood elevation changes due to physical alterations:
 1. Within six (6) months of information becoming available or project completion, whichever comes first, the Floodplain Administrator shall, for City projects, submit or, for private projects, assure that the permit applicant submits technical or scientific data to FEMA for a letter of map revision (LOMR). If no such data is submitted for private projects, no building permits shall be issued.
 2. All LOMRs 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 (CLOMRs). Approved CLOMRs allow construction of the proposed flood control project and land preparation as specified in the start of construction definition.
 - iii. 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.
6. Documentation of floodplain development. Obtain and maintain for public inspection and make available as needed the following:
 - i. Certification required by EGMC Section 16.50.060(A)(3)(i) (Residential Construction);
 - ii. Certification required by EGMC Section 16.50.060(A)(3)(ii) (Elevation and Flood-Proofing, Nonresidential Construction);
 - iii. Certification required by EGMC Section 16.50.060(A)(3)(iii) (Flood Openings);

- iv. Certification of elevation required by EGMC Section 16.50.060(C)(1)(iv) (Standards for Subdivisions and Other Proposed Development);
 - v. Certification required by EGMC Section 16.50.060(D)(2) (Floodways).
7. Map Determination. Make interpretations, where needed, as to the exact location of the boundaries of the areas of special flood hazard, where there appears to be a conflict between a 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 EGMC Section 16.50.050(B) (Appeals).
 8. Remedial Action. Take action to remedy violations of this chapter as specified in EGMC Section 16.50.040(C) (Compliance).
 9. Planning. Assure the City's General Plan and Zoning Code are consistent with floodplain management objectives herein.

16.50.040 General Provisions

- A. **Lands to Which This Chapter Applies.** This chapter shall apply to all areas of special flood hazards within the City of Elk Grove.
- B. **Basis for Establishing the Areas of Special Flood Hazard.** The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) in the "Flood Insurance Study (FIS) for Sacramento County, California, and Incorporated Areas dated June 16, 2015," with accompanying Flood Insurance Rate Maps (FIRMs) and Flood Boundary and Floodway Maps (FBFMs), dated August 15, 2012, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this chapter. This FIS and attendant mapping is the minimum area of applicability of this chapter and may be supplemented by studies for other areas which allow implementation of this chapter and which are recommended to the City Council by the Floodplain Administrator. The study, FIRMs, and FBFMs are on file at the Public Works Department at the City.
- C. **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. Violation of the requirements (including violations of conditions and safeguards) shall constitute a misdemeanor. Nothing herein shall prevent the City from taking such lawful action as is necessary to prevent or remedy any violation.
- D. **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 chapter, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.
- E. **Interpretation.** In the interpretation and application of this chapter, all provisions shall be:
 1. Considered as minimum requirements;

2. Liberally construed in favor of the City Council; and
 3. Deemed neither to limit nor repeal any other powers granted under State statutes.
- F. **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 damages. This chapter shall not create liability on the part of the City Council, any officer or employee thereof, the state of California, or the Federal Emergency Management Agency, for any flood damages that result from reliance on this chapter or any administrative decision lawfully made hereunder.

16.50.050 Floodplain Development Permit

- A. **Application.** A floodplain development permit shall be obtained before any construction or other development within any area of special flood hazard established in EGMC Section 16.50.040(B) (Basis for Establishing the Areas of special Flood Hazard). Application for a floodplain development permit shall be made on forms furnished by the City. The applicant shall provide the following minimum information:
1. Plans in duplicate, drawn to scale, showing:
 - i. Location, dimensions, and elevation of the area in question, existing or proposed structures, storage of materials and equipment, and their location;
 - ii. Proposed locations of water supply, sanitary sewer, and other utilities;
 - iii. Grading information showing existing and proposed contours, any proposed fill, and drainage facilities;
 - iv. Location of the regulatory floodway when applicable;
 - v. Base flood elevation (BFE) information as specified in EGMC Section 16.50.040(B) (Basis for Establishing the Areas of Special Flood Hazard) or EGMC Section 16.50.030(B)(3) (Review, Use, and Development of Other Base Flood Data);
 - vi. Proposed elevation in relation to mean sea level, of the lowest floor (including basement) of all structures; and
 - vii. Proposed elevation in relation to mean sea level to which any nonresidential structure will be flood-proofed, as required in EGMC Section 16.50.060(A)(3)(ii) (Nonresidential Construction) and detailed in FEMA Technical Bulletin TB 3-93.
 2. Certification from a registered civil engineer or architect that the nonresidential flood-proofed building meets the flood-proofing criteria in EGMC Section 16.50.060(A)(3)(ii) (Nonresidential Construction).

3. For a crawl-space foundation, location and total net area of foundation openings as required in EGMC Section 16.50.060(A)(3)(iii) (Flood Openings) and detailed in FEMA Technical Bulletins 1-93 and 7-93.
 4. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
 5. All appropriate certifications listed in EGMC Section 16.50.030(B)(5) (Documentation of Floodplain Development).
- B. Types of Development Allowed in Areas of Special Flood Hazard.** Consistent with the City's General Plan, a floodplain development permit shall only be issued for the following types of development:
1. Non-habitable accessory structures as provided in EGMC Section 16.50.060.A.4;
 2. New subdivisions and other proposed development pursuant to the provisions of EGMC Section 16.50.060.C.
- C. Designated Approving Authority.** Generally, the Floodplain Administrator shall be the designated approving authority for floodplain development permits; however, when a floodplain development permit is combined with a tentative subdivision map, tentative parcel map, design review, or other entitlement required by EGMC Title 23 (Zoning), the designated approving authority shall be same as for the other required approvals.
- D. Appeals.** Appeals of the decision on a floodplain development permit shall be conducted pursuant to the provisions of EGMC Chapter 1.11.

16.50.060 Provisions for Flood Hazard Reduction

- A. Standards of Construction.** In all areas of special flood hazards, the following standards are required:
1. Anchoring. All new construction and substantial improvements of structures, including manufactured homes and tanks (e.g., water, propane), 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. Construction Materials and Methods. All new construction and substantial improvements of structures, including manufactured homes, shall be constructed:
 - i. With flood-resistant materials, and utility equipment resistant to flood damage for areas below the base flood elevation;
 - ii. Using methods and practices that minimize flood damage;
 - iii. 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; and

- iv. Within Zones AH or AO, so that there are adequate drainage paths around structures on slopes to guide floodwaters around and away from proposed structures.
3. Elevation and Flood-Proofing of Improvements to Existing Structures. The following shall apply to remodels of or improvements to existing structures already located within areas of special flood hazard.
 - i. Residential construction. When new square footage is proposed for an existing residential structure that is already constructed in an area of special flood hazard, the lowest floor, including basement, of the new square footage shall be in conformance with the following standards. Upon the completion of the new square footage, the elevation of the new floor, including basement, shall be certified by a registered civil engineer or licensed land surveyor to be properly elevated. Such certification and verification shall be provided to the Floodplain Administrator.
 1. In AE, AH, A1-30 Zones, elevated to one foot (1') above the base flood elevation (BFE).
 2. In an AO zone, elevated above the highest adjacent grade to a height equal to or exceeding the depth number specified in feet on the FIRM, or elevated at least two feet (2') above the highest adjacent grade if no depth number is specified.
 3. In an A zone, without BFEs specified on the FIRM, elevated to or above the base flood elevation, as determined under EGMC Section 16.50-030(B)(3) (Review, Use, and Development of Other Base Flood Data).
 - ii. Nonresidential construction. When new square footage is proposed for an existing nonresidential structure (commercial, office, or industrial development) that is already constructed in an area of special flood hazard, all new improvements shall either be elevated to conform with EGMC Section 16.50.060(A)(3)(i) (Residential Construction) or:
 1. Be flood-proofed, together with attendant utility and sanitary facilities, below the elevation recommended under EGMC Section 16.50.060.A.3.i, so that the structure is watertight with walls substantially impermeable to the passage of water;
 2. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
 3. Be certified by a registered civil engineer or architect that the standards of EGMC Sections 16.50.060(A)(3)(ii)(1) and (2) are satisfied. Such certification will be provided to the Floodplain Administrator.

- iii. Flood openings. All new construction and substantial improvements of structures with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, building access, or storage, and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwater. Designs for meeting this requirement must meet the following minimum criteria:
 1. For non-engineered openings:
 - a. Have a minimum of two openings on different sides having a total net area of not less than one (1) square inch for every one (1) square foot of enclosed area subject to flooding;
 - b. The bottom of all openings shall be no higher than one foot (1') above grade;
 - c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwater; and
 - d. Buildings with more than one enclosed area must have openings on exterior walls for each area to allow floodwater to directly enter; or
 2. Be certified by a registered civil engineer or architect.
4. New non-habitable accessory structures
 - i. Attached garages
 1. 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 floodwaters. See EGMC Section 16.50.060(A)(3)(iii) (Flood Openings). Areas of the garage below the BFE must be constructed with flood-resistant materials. See EGMC Section 16.50.060(A)(2) (Construction Materials and Methods).
 2. 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.
 - ii. Detached garages and small accessory buildings. An accessory structure used solely for parking or other types of small accessory buildings, as defined in EGMC Section 16.50.020 (Definitions), 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:
 1. Use of the accessory structure must be limited to parking or limited storage;

2. The portions of the accessory structure located below the BFE must be built using flood-resistant materials;
 3. The accessory structure must be adequately anchored to prevent flotation, collapse, and lateral movement;
 4. Any mechanical and utility equipment in the accessory structure must be elevated or flood-proofed to or above the BFE;
 5. No hazardous materials shall be stored within the structure;
 6. The accessory structure must comply with floodplain encroachment provisions in EGMC Section 16.50.060(D) (Floodways);
 7. The accessory structure must be designed to allow for the automatic entry of floodwaters in accordance with EGMC Section 16.50.060(A)(3)(iii) (Flood Openings); and
 8. Detached garages and accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in EGMC Section 16.50.060(A) (Standards of Construction).
- iii. Other accessory structures. Other accessory structures, including but not limited to landscape features, pools and spas, patio covers, gazebos, tanks, and lean-tos, as defined in EGMC Section 23.100.020(A)(1) (Accessory Structure) 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:
1. The structure cannot be permanently occupied;
 2. The portions of the accessory structure located below the BFE must be built using flood-resistant materials;
 3. The accessory structure must be adequately anchored to prevent flotation, collapse, and lateral movement;
 4. Any mechanical and utility equipment in the accessory structure must be elevated or flood-proofed to or above the BFE;
 5. The accessory structure must comply with floodplain encroachment provisions in EGMC Section 16.50.060(D) (Floodways);
 6. The accessory structure must be designed to allow for the automatic entry of floodwaters in accordance with EGMC Section 16.50.060(A)(3)(iii) (Flood Openings); and
 7. Detached garages and accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in EGMC Section 16.50.060(A) (Standards of Construction).

B. Standards for Utilities

1. All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate:
 - i. Infiltration of floodwaters into the systems; and
 - ii. Discharge from the systems into floodwaters.
2. On-site waste disposal systems shall be located to avoid impairment to them, or contamination from them, during flooding.

C. Standards for Subdivisions and Other Proposed New Development

1. All new subdivision proposals and other proposed new development, including proposals for manufactured home parks and subdivisions shall:
 - i. Identify the special flood hazard areas (SFHA) and base flood elevations (BFE).
 - ii. Identify the elevations of lowest floors of all proposed structures and pads on the final plans and/or elevation certificate certified from a registered civil engineer or architect.
 - iii. Provide a buildable area outside the area of special flood hazard of sufficient size to accommodate a residence and associated structures.
 - iv. In Zones AE and AH and in local flood hazard areas, elevate the lowest finished floor at least one-and-one-half feet (1.5') above the base flood elevation. Building pads for slab-on-grade construction shall be at least one-and-one-half feet (1.5') above the base flood elevation and the lowest finished floor shall be at least one-and-one-half feet (1.5') above the base flood elevation.
 - v. If the site is filled above the base flood elevation, the following as-built information for each structure shall be certified by a registered civil engineer or licensed land surveyor and provided as part of an application for a letter of map revision based on fill (LOMR F) to the Floodplain Administrator:
 1. Lowest floor elevation
 2. Pad elevation
 3. Lowest adjacent grade
2. All subdivision proposals and other proposed development shall be consistent with the need to minimize flood damage.
3. All subdivision proposals and other proposed development shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
4. All subdivisions and other proposed development shall provide adequate drainage to reduce exposure to flood hazards.
5. Vehicular access to the buildable area(s) of the proposed development shall be at or above the 10-year flood elevation.

6. While the use of fill to create buildable area is strongly discouraged by City policy, should it be allowed, there shall be no net increase to the water surface elevation adjacent to, downstream, and upstream of the development, as determined by the City. Other improvements may be required as part of the proposed project. A Conditional Letter of Map Revision (CLOMR) issued by FEMA shall be required prior to grading permit issuance, unless only a LOMR is required. A Letter of Map Revision (LOMR) issued by FEMA shall be required prior to acceptance of the improvements or issuance of the first building permit, whichever occurs first.
- D. **Floodways.** Since floodways are an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles, and erosion potential, the following additional provisions apply:
1. Until a regulatory floodway is adopted by FEMA, no new construction, substantial development, or other development (including fill) shall be permitted within Zones A1-30 and AE, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other development, will not increase the water surface elevation of the base flood more than one foot (1') at any point within the City.
 2. Within an adopted regulatory floodway, the City shall prohibit encroachments, including fill, new construction, substantial improvements, and other development, unless certification by a registered civil engineer is provided demonstrating that the proposed encroachment shall not result in any increase in flood levels during the occurrence of the base flood discharge.