

# Article 12.0 Floodplain

## 12.1. Floodplain Overlay District

### 12.1.1. Purpose

- A. To meet or exceed minimum standards for floodplain regulation (Minimum Floodplain Regulations) in accordance with the Federal Emergency Management Agency (FEMA) and the Colorado Water Conservation Board (CWCB) which qualify unincorporated areas of Larimer County for flood insurance under the National Flood Insurance Program (NFIP). Minimum Floodplain Regulations include the following regulatory documents, along with any revisions thereto, and are hereby adopted by reference and declared to be a part of Article 12.0:
  - 1. 44 Code of Federal Regulations §65.3 (44 CFR §65.3)
  - 2. National Flood Insurance Act of 1968 (NFIA)
  - 3. Section 2 Colorado Code of Regulations 408-1 (2 CCR 408-1)
  - 4. CWCB Rules and Regulations for Regulatory Floodplains in Colorado (CWCB Rules and Regulations)
- B. To help preserve, protect, and improve the safety, health, and property of Larimer County residents from the adverse impacts of flooding.
- C. To prevent floodplain development and land uses which would create new flood hazards or cause increases in flood elevations beyond those allowable under the Minimum Floodplain Regulations.
- D. To promote floodplain development practices which minimize public and private property losses due to flooding.
- E. To provide controls for filling, excavation, dredging, or other activities which alter the natural floodplains or stream channels.

### 12.1.2. Applicability and Administration

#### A. Authority

The Legislature of the State of Colorado has, in Title 29, Article 20 of the Colorado Revised Statutes, delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses. Therefore, the Board of County Commissioners of Larimer County, Colorado, does hereby adopt the floodplain regulations of Article 12.0.

#### B. Applicability

##### 1. Applicability

Article 12.0. of the Code applies to all lands in the Floodplain Overlay (FPO) District, as defined in §12.1.3, *Floodplain Overlay District Defined*. If a lot or parcel of land lies partly within the FPO District, Article 12.0 applies to the part of such lot or parcel lying within the District. If a building or structure lies partly within the FPO District, Article 12.0 applies to the entire building or structure lying within the District.

##### 2. Floodplain Development

FEMA requires all communities that participate in the NFIP, such as Larimer County, to regulate “development” that occurs within the Special Flood Hazard Area (SFHA). FEMA defines development as “any manmade change to improved and unimproved real

estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating or drilling operations”. “Development” shall be referred to as “floodplain development” throughout Article 12.0. Floodplain development in the FPO District requires a Floodplain Development Permit (FDP) in accordance with §12.1.4. Larimer County shall also regulate the use(s) associated with floodplain development within the FPO district.

**C. Warning and Disclaimer of Liability**

The degree of flood protection required by Article 12.0 is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions greater floods can and will occur and flood heights may be increased by manmade or natural causes. Article 12.0 does not imply that land outside the FPO District or uses permitted within such areas will be free from flooding or flood damages, or that compliance with these regulations will prevent flood damage. Article 12.0 shall not create liability on the part of Larimer County or any official or employee thereof for any flood damages that result from reliance on Article 12.0 or any administrative decision.

**D. Abrogation and Greater Restrictions**

1. To the extent that the Minimum Floodplain Regulations conflict with a provision of Article 12.0 the most restrictive controls.
2. Article 12.0 does not repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. Where Article 12.0 and another ordinance, easement, covenant, or deed restriction conflict or overlap, the more restrictive applies.

**E. Severability**

Article 12.0. and the various parts thereof are hereby declared to be severable. Should a portion of Article 12.0 be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the section as a whole, or any portion thereof, other than the section so declared to be unconstitutional or invalid.

**F. Penalties for Noncompliance**

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of Article 12.0 and other applicable regulations. Neither shall the legal use of a structure or land be changed without full compliance with the terms of Article 12.0 and other applicable regulations. Violation of the provisions of Article 12.0 by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) may result in revocation of the FDP or other enforcement action under §1.9, *Enforcement*. The County Engineer reserves the right to require an FDP reflecting the current or as-built condition of illegal floodplain development to facilitate compliance with requirements under this Code. Nothing contained herein shall prevent Larimer County from taking such other lawful action as is necessary to prevent or remedy any violation.

**G. County Engineer Role**

The County Engineer or his or her designee(s) is responsible for the administration and implementation of the requirements of the FPO District, including reviewing all floodplain development proposals in accordance with Article 12.0. The designee(s) of the County Engineer shall be established by resolution of the Board of County Commissioners.

**H. Referrals from Other County Departments**

1. Land use applications will be reviewed by the Planning Division to determine whether the application may be within the FPO District. If it appears to the Planning Division that the application may be within the FPO District, then the Planning Division shall refer the application to the County Engineer for review and comment. Final approval of land use applications within the FPO District, in accordance with the Larimer County Land Use Code, shall not be granted until a Floodplain Development Permit has been issued or the County Engineer has determined that a Floodplain Development Permit is not required.
2. Building permit applications will be reviewed by the Building Division to determine whether the application may be within the FPO District. If it appears to the Building Division that the application may be within the FPO District, then the Building Division shall refer the application to the County Engineer for review and comment. Building permits within the FPO District shall not be issued until a Floodplain Development Permit has been issued or the County Engineer has determined that a Floodplain Development Permit is not required.

**12.1.3. Floodplain Overlay District Defined****A. Floodplain Overlay District**

The Floodplain Overlay (FPO) District includes the FEMA Floodplain, Best Available Floodplain, Municipal Floodplain, Poudre GMA Floodplain, and Larimer County Flood-Prone Areas as defined below:

**1. FEMA Floodplain****a. FEMA Floodplain Definition**

The FEMA Floodplain is defined as the areas within the Special Flood Hazard Areas (SFHAs) identified by FEMA in a scientific and engineering report entitled, "The Flood Insurance Study (FIS) for Larimer County," dated January 15, 2021 with accompanying Flood Insurance Rate Maps (FIRM) and Digital Flood Insurance Rate Maps (DFIRM), and any revisions thereto. The term "DFIRM" includes all flood zone designations and technical information displayed on the maps, explanatory matter, technical addenda, modeling and calculations, water surface elevations, profiles, cross sections, workmaps, and other underlying detailed study data, such as information published in the FIS report and supporting documentation, as well as approved Letters of Map Revision (LOMR), Letters of Map Amendment (LOMA), and Letters of Map Revision based on Fill (LOMR-F). The FIS, FIRMs, DFIRMs, and any revisions thereto, are hereby adopted by reference and declared to be a part of Article 12.0. The County Engineer shall keep a copy of the FIS, FIRMs, and DFIRMs on file and available for public inspection.

**b. FEMA Floodplain Zones**

The FEMA Floodplain may include, but is not limited to, flood zone designations such as Zone AE (Floodway), Zone AE (Flood Fringe), Zone A, Zone AH, Zone AO, Zone X (Shaded), and Zone X (Shaded Protected by a Levee).

**2. Best Available Floodplain****a. Best Available Floodplain Definition**

The Best Available Floodplain is defined as the areas within 1% annual chance event (1% ACE) or 0.2% annual chance event (0.2% ACE) flood zones identified by draft or preliminary flood hazard information which meet the following criteria:

- i. The draft or preliminary flood hazard information is supplied by FEMA, CWCB, or another source.
- ii. The draft or preliminary flood hazard information is more restrictive than the FEMA Floodplain.
- iii. The draft or preliminary information has been approved by CWCB.

**b. Best Available Floodplain Zones**

The Best Available Floodplain may include, but is not limited to, flood zone designations such as Zone AE (Floodway), Zone AE (Flood Fringe), Zone A, Zone AH, Zone AO, Zone X (Shaded), and Zone X (Shaded Protected by a Levee).

**3. Municipal Floodplain****a. Municipal Floodplain Zone Definition**

The Municipal Floodplain Zone is defined as the areas within flood zones identified by incorporated cities and towns within Larimer County which have been adopted as a regulatory floodplain by resolution of the Larimer County Board of Commissioners (BCC) and includes lands regulated by Larimer County.

**b. Municipal Floodplain Zones**

The Municipal Floodplain Zones may include, but is not limited to, flood zone designations such as Zone AE (Floodway), Zone AE (Flood Fringe), Zone A, Zone AH, Zone AO, Zone X (Shaded), Zone X (Shaded Protected by a Levee), High Risk, High-Risk Floodway, and Moderate Risk.

**4. Cache La Poudre Growth Management Area Floodplain (Poudre GMA Floodplain)****a. Poudre GMA Floodplain Definition**

The Poudre GMA Floodplain includes the area within the FEMA floodplain and Best Available Floodplain for which the Cache La Poudre River is the flooding source and in the Fort Collins Growth Management Area (GMA).

**b. Poudre GMA Floodplain Zones**

The Poudre GMA Floodplain may include, but is not limited to, flood zone designations such as Zone AE (Floodway), Zone AE (Flood Fringe), Zone X (Shaded), and Zone X (Shaded Protected by a Levee).

**5. Larimer County Flood-Prone Areas****a. Larimer County Flood-Prone Areas (FPAs) Definition**

Larimer County FPAs are defined as the areas which are designated as prone to flooding by resolution of the Larimer County Board of Commissioners (BCC).

**b. Larimer County Flood-Prone Areas Floodplain Zones**

The Larimer County FPAs may or may not be associated with a flood recurrence interval. Flood zones may include, but are not limited to, designations such as Zone AE (Floodway), Zone AE (Flood Fringe), Zone X (Shaded), and Zone X (Shaded Protected by a Levee).

**B. Official Map****1. Digital Maps**

The County Engineer shall maintain digital maps delineating the location and boundaries of the FEMA Floodplain, Best Available Floodplain, Municipal Floodplain, Poudre GMA Floodplain, and Larimer County FPAs. The digital maps shall depict in plan view the horizontal boundary of the flood hazards described in the underlying flood studies. The maps depicting the FEMA Floodplain, Best Available Floodplain, Municipal Floodplain, Poudre GMA Floodplain, and Larimer County FPAs together establish the areas governed by the provisions of Article 12.0 and constitute the Official Map of Larimer County's FPO District (Official Map).

**2. Availability to Public**

The most current Official Map and supporting data shall be on file in the Engineering Department in electronic format and available for public inspection during normal business hours.

**C. Official Map Interpretation****1. Structure Determination**

The County Engineer shall determine which uses, parcels, structures, or other facilities are located within the FPO District. This determination shall include situations where a mapped boundary appears to conflict with actual field conditions. The County Engineer may require and accept information from a licensed Colorado Professional Engineer (PE) and/or licensed Colorado Professional Surveyor (PLS) to make this determination. Such determinations do not contract or expand the boundaries of the FPO District or result in an amendment to the Official Map.

**2. Base Flood Elevation Determination**

The County Engineer shall determine the Base Flood Elevation (BFE) which is applicable for regulatory purposes within the FPO District. The County Engineer may require and accept information from a PE to determine the BFE for regulatory purposes.

**3. Best Available Data**

In making interpretations of the Official Map, the County Engineer shall refer, as necessary, to the best available data at the time of the determination. Best available data used to make interpretations of the Official Map may include the engineering study upon which the Official Map and associated elevations are based, the most recent detailed terrain or survey data certified by a PE or PLS, updated hydrologic or hydraulic information, and/or any other reliable information that the County Engineer determines to meet an acceptable level of technical accuracy in accordance with prevailing industry practices. Where more than one source of data exists, the data which is more restrictive at the time of determination shall be used.

**D. Official Map Amendments****1. Conditional Letter of Map Revision (CLOMR)**

Proponents of floodplain development within the FEMA Floodplain that would, upon construction, affect the hydrologic and hydraulic characteristics of a flooding source and result in the modification of the floodway zone, the Base Flood Elevations (BFEs), or FEMA's SFHAs, must submit technical data in the form of a Conditional Letter of Map Revision (CLOMR) request to the Larimer County Flood Review Board (FRB) and FEMA. The County Engineer may also require that a CLOMR be submitted for projects at his or her discretion. CLOMRs must be reviewed and approved by the FRB prior to County approval of FEMA's Overview and Concurrence Form per §12.1.6, *Flood Review Board*. Final approval of the FEMA MT-2 Form shall be issued by the County Engineer.

**2. Letter of Map Revision (LOMR)**

Proponents of floodplain development within the FEMA Floodplain must submit technical data in the form of a Letter of Map Revision (LOMR) request to the FRB and FEMA within six months from the completion of construction if:

- a. The floodplain development received a Conditional Letter of Map Revision (CLOMR) from FEMA before the start of construction,
- b. The floodplain development results in an increase in the 1% annual chance (100-year) water surface elevation,
- c. The floodplain development results in a decrease in the 1% annual chance (100-year) water surface elevation greater than 0.3 foot, or
- d. The floodplain development involves alteration(s) of a watercourse which will relocate the channel.

The County Engineer may also require that a LOMR be submitted for projects at his or her discretion. LOMRs pertaining to the FEMA Floodplain must be reviewed and approved by the FRB prior to County approval of FEMA's Overview and Concurrence Form per §12.1.6, *Flood Review Board*. Final approval of the FEMA MT-2 Form shall be issued by the County Engineer.

**3. Floodplain Map Adoption**

The Official Map shall be deemed updated upon the following circumstances:

**a. FEMA Floodplain Adoption**

The FEMA Floodplain shall be deemed updated upon FEMA's effective date of a new Flood Insurance Rate Map (FIRM), Digital Flood Insurance Rate Map (DFIRM), or Flood Insurance Study (FIS).

**b. Best Available Floodplain Adoption**

The Best Available Floodplain shall be deemed updated upon resolution of the County Commissioners.

**c. Municipal Floodplain Adoption**

The Municipal Floodplain shall be deemed updated upon resolution of the County Commissioners.

**d. Poudre GMA Floodplain Adoption**

The Poudre GMA Floodplain, being defined by the FEMA Floodplain, the Best Available Floodplain, and the Fort Collins Growth Management Area (GMA), shall be deemed updated in accordance with their respective procedures for adoption or upon the resolution of the Board of County Commissioners.

**e. Larimer County FPAs Adoption**

The Larimer County FPAs shall be deemed updated upon resolution of the Board of County Commissioners.

**4. Clerical Errors**

The County Engineer may correct clerical errors in the Official Map as they are discovered.

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**12.1.4. Floodplain Development Permits****A. Minimum Federal and State Standards**

All floodplain development in the FPO District must meet or exceed the Minimum Floodplain Regulations.

**B. Permits Required**

All floodplain development in the FPO District, unless meeting the criteria provided in the following exceptions, requires an approved Floodplain Development Permit (FDP) prior to the start of construction. Floodplain development in the FPO District which does not meet the following criteria for exclusion and is not covered by an FDP may result in enforcement action under §1.9, *Enforcement*.

1. FDPs are required for routine maintenance of buildings. However, requirements may be modified for routine maintenance of buildings at the discretion of the County Engineer. Competent evidence may be required by the County Engineer for routine maintenance activities within the FPO District which demonstrates reasonable costs of labor and materials associated with routine maintenance activities. Such evidence may include, but is not limited to, an itemized cost estimate and affidavit(s) attesting to the truth and validity of the cost estimate. Competent evidence shall be submitted in accordance with the Larimer County Floodplain Development Guide. The County Engineer shall determine if the costs of labor and materials for a floodplain development project are reasonable.
2. FDPs are not required for routine maintenance of infrastructure which does not result in modifications to the hydraulic characteristics of a floodplain, the FPO District, or the Base Flood Elevations (BFEs) as determined by the County Engineer. The County Engineer may require an FDP for maintenance activities at his or her discretion if it appears an activity may impact the hydraulic characteristics of a floodplain, the FPO District, or the Base Flood Elevations (BFEs).
3. FDPs are not required for activities such as gardening, plowing, and similar practices that do not involve filling, excavation, or grading.
4. FDPs are not required for the placement of furniture and other accessory materials which are not fixed to the ground or structure, used routinely by the occupants of a structure, and can be moved quickly in event of a flood as determined by the County



Engineer. This exemption does not include materials which are determined to be outdoor storage materials per this Code or by the County Engineer.

5. FDPs are not required for floodplain development within a flood zone designated as a FEMA Floodplain Zone X (Shaded), FEMA Floodplain Zone X (Shaded Protected by a Levee), Best Available Floodplain Zone X (Shaded), or a Best Available Floodplain Zone associated with 0.2% annual chance of flooding which is not located within the Poudre GMA Floodplain.

### **C. Floodplain Development Standards**

Larimer County Engineering Standards and Floodplain Development Guidance Documents (Floodplain Development Standards) shall provide standards and guidance for FDP submittals. Floodplain Development Standards include, but are not limited to, the most current version of the documents listed below along with any other documentation which may be designated at the discretion of the County Engineer for floodplain development proposals:

1. Larimer County Rural Area Road Standards (LCRARS)
2. Larimer County Urban Area Street Standards (LCUASS)
3. Larimer County Stormwater Design Standards (Stormwater Standards)
4. Larimer County Floodplain Development Guide (Floodplain Guide)
5. FEMA Technical Bulletins and Technical Documents (FEMA Guidance)

### **D. Floodplain Permit Submittal Requirements**

FDP permit submittal materials must be submitted to the County Engineer in a manner which is complete, accurate, and in accordance with the Floodplain Development Standards to obtain an FDP unless the County Engineer determines that a particular requirement is not required. Additional materials may be required at the discretion of the County Engineer.

### **E. Permit Review**

#### **1. Completeness Review**

- a. After an application for an FDP is submitted, the County Engineer shall review it for completeness.
- b. The County Engineer may suspend the processing of an FDP application at the request of the applicant or whenever the County Engineer determines that the application is not complete. If the County Engineer deems an application incomplete, the County Engineer shall notify the applicant of any deficiencies. Once the requested information has been provided, the application shall be accepted as of that date and the County Engineer shall proceed to process the application. The County Engineer may declare an application withdrawn if the application is not deemed complete within 90 days of the initial submittal date.

#### **2. Technical Review**

- a. The County Engineer shall review the FDP application and associated submittals for technical adequacy in accordance with the Floodplain Development Standards and communicate any deficiencies to the applicant and/or owner as appropriate.
- b. The County Engineer may suspend the processing of an FDP application at the request of the applicant or whenever the County Engineer determines that the application is not technically adequate. If the County Engineer deems an application not technically adequate, the County Engineer shall notify the applicant of any



deficiencies. Once the deficiencies have been corrected, the County Engineer shall proceed to process the application. The County Engineer may declare an application withdrawn if the application is not deemed technically adequate within one year of the initial submittal date.

**3. Application Review Criteria**

The approval or denial of an FDP application shall be based on all applicable subsections of Article 12.0 and the following factors:

- a. The completeness and technical adequacy of the FDP application in accordance with the Floodplain Development Standards
- b. The probability that the floodplain development will result in unreasonable risk of harm to people or property, both onsite and in the surrounding area
- c. The safety of access to and from the property during flood events
- d. The availability of alternate locations having a reduced risk of flooding impacts.
- e. Impacts due to scour and erosion.
- f. The impacts that the floodplain development will have on, or experience due to, the:
  - i. Flood profile and flood heights (1% ACE)
  - ii. Floodway
  - iii. Stability of the channel and/or sedimentation

**F. County Engineer's Determination**

1. If the County Engineer finds in reviewing an FDP application that the application meets the applicable standards set forth in Article 12.0, the County Engineer shall approve the permit.
2. If the County Engineer finds that the application can only meet all applicable standards if the FDP approval is conditioned, then the County Engineer shall include all necessary and reasonable conditions when issuing the permit.
3. If the County Engineer finds that the application does not meet one or more applicable standards, the County Engineer may deny the application as proposed.
4. The County Engineer's determination of approval shall be deemed final as of the date that the FDP is issued.

**G. Appeal of County Engineer's Determination****1. Right to Appeal**

Any person aggrieved by a final decision of the County Engineer based upon or made in the course of the administration or enforcement of the provisions of Article 12.0 may appeal to the Board of County Commissioners.

**2. Appeal Application**

The procedures and requirements for filing an appeal may be found in §6.7.2, *Appeals*.

**3. Public Hearing**

Upon receipt of a complete appeal application, the Board of County Commissioners must hold a public hearing on the appeal application following the procedures specified in the LUC.

**4. Review Criteria**

In deciding upon an appeal of a County Engineer administrative decision or interpretation made under Article 12.0, the County Commissioners shall consider the factors specified §12.1.4.E.3, *Application Review Criteria*.

**5. Decision of the Board**

The Board of County Commissioners shall make a record of its decision on the appeal in the same manner as other appeals filed under §6.7.2, *Appeals*. The County Engineer shall maintain records of the outcome of all appeals filed.

**6. Effect of Decision**

- a. In no instance can a decision on an appeal to the Board of County Commissioners result in a modification to the FEMA's regulatory floodplain boundaries or associated data.
- b. In order to modify the regulatory boundaries established by FEMA, interested parties must use FEMA's LOMC process or consult FEMA on other options for modification.

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**12.1.5. Floodplain Development Requirements****A. General Requirements**

The following requirements apply for all floodplain development in the FPO District:

**1. Flood Damage Protection**

All floodplain development in the FPO District shall be designed to reasonably protect from flooding and/or adverse impacts due to flooding.

**2. Use Restrictions**

The type(s) of uses allowed for a structure or property within the FPO District shall be in accordance with Table 12-1, below.

Table 12-1: Table of Allowed Uses – FPO District

A = Allowed Use Blank Cell = Prohibited Use

FLOODPLAIN	FEMA				BEST AVAILABLE				MUNICIPAL				POUDRE GMA				LARIMER COUNTY FPAS
Flood Zone	AE (FLOODWAY)	AE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR HIGH RISK (FLOODWAY)	AE OR HIGH RISK (FLOOD FRINGE)	MODERATE RISK	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	ALL ZONES
<b>AGRICULTURAL USES</b>																	
Agricultural Operation	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
<b>Agricultural Cultivation</b>																	
Community Garden	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Forestry	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Nursery		A	A	A		A	A	A		A	A	A		A	A	A	A
Retail		A	A	A		A	A	A		A	A	A		A	A	A	A
Wholesale		A	A	A		A	A	A		A	A	A		A	A	A	A
Tree Farm		A	A	A		A	A	A		A	A	A		A	A	A	A
Retail		A	A	A		A	A	A		A	A	A		A	A	A	A
Wholesale		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Agricultural Support and Services</b>																	
Agricultural Equipment Repair & Sales		A	A	A		A	A	A		A	A	A		A	A	A	A
Agricultural Labor Housing		A	A	A		A	A	A		A	A	A		A	A	A	A
Custom Meat Processing Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
Livestock Auction		A	A	A		A	A	A		A	A	A		A	A	A	A
Packing Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Animal Agriculture</b>																	
Commercial Feedlot or Dairy		A	A	A		A	A	A		A	A	A		A	A	A	A
Equestrian Operation	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A

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Large	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Small	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Poultry & Egg Production	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Small	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Large	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
<b>RESIDENTIAL USES</b>																	
<b>Household Living</b>																	
Dwelling, Cabin		A	A	A		A	A	A		A	A	A				A	A
Dwelling, Co-Housing		A	A	A		A	A	A		A	A	A				A	A
Dwelling, Duplex		A	A	A		A	A	A		A	A	A				A	A
Dwelling, Live/Work		A	A	A		A	A	A		A	A	A				A	A
Dwelling, Multifamily		A	A	A		A	A	A		A	A	A				A	A
Dwelling, Single-Family Attached		A	A	A		A	A	A		A	A	A				A	A
Dwelling, Single-Family Detached		A	A	A		A	A	A		A	A	A				A	A
Dwelling, Triplex or Fourplex		A	A	A		A	A	A		A	A	A				A	A
Manufactured Home		A	A	A		A	A	A		A	A	A				A	A
Manufactured Housing Park		A	A	A		A	A	A		A	A	A				A	A
Medium Density		A	A	A		A	A	A		A	A	A				A	A
High Density		A	A	A		A	A	A		A	A	A				A	A
Modular Home		A	A	A		A	A	A		A	A	A				A	A
<b>Group Living</b>																	
Assisted Living Facility		A	A	A		A	A	A		A	A	A					
Community Residential Homes		A	A	A		A	A	A		A	A	A					

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Flood Zone	AE (FLOODWAY)	AE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR HIGH RISK (FLOODWAY)	AE OR HIGH RISK (FLOOD FRINGE)	MODERATE RISK	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	ALL ZONES
Congregate Residence		A	A	A		A	A	A		A	A	A					
Group Home		A	A	A		A	A	A		A	A	A					
Group Home Aged		A	A	A		A	A	A		A	A	A					
Group Home for Persons W/ Behavioral or Mental Health Disorders		A	A	A		A	A	A		A	A	A					
<b>PUBLIC, CIVIC &amp; INSTITUTIONAL USES</b>																	
<b>Community &amp; Cultural Facilities</b>																	
Assembly		A	A	A		A	A	A		A	A	A		A	A	A	A
Indoor only		A	A	A		A	A	A		A	A	A		A	A	A	A
With outdoor area		A	A	A		A	A	A		A	A	A		A	A	A	A
Cemetery		A	A	A		A	A	A		A	A	A				A	A
With Funeral Home or Crematorium		A	A	A		A	A	A		A	A	A		A	A	A	A
Crematorium		A	A	A		A	A	A		A	A	A		A	A	A	A
Cultural Institution		A	A	A		A	A	A		A	A	A		A	A	A	A
Day Care Center		A	A	A		A	A	A		A	A	A					
Funeral Home		A	A	A		A	A	A		A	A	A		A	A	A	A
With Crematorium		A	A	A		A	A	A		A	A	A		A	A	A	A
Prison or Detention Center		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Educational Facilities</b>																	
School, Nonpublic		A	A	A		A	A	A		A	A	A					
School, Public		A	A	A		A	A	A		A	A	A					
<b>Healthcare Facilities</b>																	

Table 12-1: Table of Allowed Uses – FPO District

A = Allowed Use Blank Cell = Prohibited Use

FLOODPLAIN	FEMA				BEST AVAILABLE				MUNICIPAL				POUDRE GMA				LARIMER COUNTY FPAS
Flood Zone	AE (FLOODWAY)	AE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR HIGH RISK (FLOODWAY)	AE OR HIGH RISK (FLOOD FRINGE)	MODERATE RISK	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	ALL ZONES
Health Services		A	A	A		A	A	A		A	A	A					
Hospital		A	A	A		A	A	A		A	A	A					
Medical or Dental Clinic		A	A	A		A	A	A		A	A	A					
Rehabilitation Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Parks and Open Lands</b>																	
Natural Resources & Wildlife Area	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Park or Playground		A	A	A		A	A	A		A	A	A		A	A	A	A
Regional Open Space & Trails	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Reservoir Park	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Urban Open Space & Trail	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
<b>COMMERCIAL USES</b>																	
<b>Agriculture &amp; Animal Uses</b>																	
Garden Supply Center		A	A	A		A	A	A		A	A	A		A	A	A	A
Kennel, Commercial		A	A	A		A	A	A		A	A	A		A	A	A	A
Indoor Only		A	A	A		A	A	A		A	A	A		A	A	A	A
Outdoor Animal Use Area		A	A	A		A	A	A		A	A	A		A	A	A	A
Pet Animal Service Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
Veterinary Clinic or Hospital, Livestock		A	A	A		A	A	A		A	A	A		A	A	A	A
Indoor Only ≤ 5,000 SF or Outdoor Animal Use Area ≤ 1,000 SF		A	A	A		A	A	A		A	A	A		A	A	A	A
Indoor Only > 5,000 SF or		A	A	A		A	A	A		A	A	A		A	A	A	A

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Flood Zone	AE (FLOODWAY)	AE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR HIGH RISK (FLOODWAY)	AE OR HIGH RISK (FLOOD FRINGE)	MODERATE RISK	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	ALL ZONES
Outdoor Animal Use Area >1,000 SF																	
Veterinary Clinic or Hospital, Pet Animal		A	A	A		A	A	A		A	A	A		A	A	A	A
Indoor Only ≤ 2,500 SF or Outdoor Animal Use Area ≤ 200 SF		A	A	A		A	A	A		A	A	A		A	A	A	A
Indoor Only > 2,500 SF and Outdoor Animal Use Area <200 SF		A	A	A		A	A	A		A	A	A		A	A	A	A
Outdoor Animal Use Area >200 SF		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Food &amp; Beverage Services</b>																	
Bar or Tavern		A	A	A		A	A	A		A	A	A		A	A	A	A
Microbrewery, Cidery, Winery, Meadery or Distillery		A	A	A		A	A	A		A	A	A		A	A	A	A
Restaurant		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Lodging Facilities</b>																	
Bed & Breakfast Inn		A	A	A		A	A	A		A	A	A		A	A	A	A
≤ Ten-Guests		A	A	A		A	A	A		A	A	A		A	A	A	A
> Ten-Guests		A	A	A		A	A	A		A	A	A		A	A	A	A
Boarding or Rooming House		A	A	A		A	A	A		A	A	A		A	A	A	A
Hotel or Motel		A	A	A		A	A	A		A	A	A		A	A	A	A
Resort Lodge or Resort Cottages		A	A	A		A	A	A		A	A	A		A	A	A	A
Short-term Rental				A				A				A				A	A



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Short-term Rental, <u>Hosted</u>		A	A	A		A	A	A		A	A	A		A	A	A	A
≤ Ten Occupants 1-10 Guests (Small)		A	A	A		A	A	A		A	A	A		A	A	A	A
> Ten Occupants 11-16 Guests (Large)		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Marijuana</b>																	
Medical Marijuana-infused Products Manufacturer		A	A	A		A	A	A		A	A	A		A	A	A	A
Medical Marijuana Center		A	A	A		A	A	A		A	A	A		A	A	A	A
Medical Marijuana Optional Premises Cultivation Operation		A	A	A		A	A	A		A	A	A		A	A	A	A
Private Marijuana Clubs		A	A	A		A	A	A		A	A	A		A	A	A	A
Retail Marijuana Cultivation Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
Retail Marijuana Product Manufacturing Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
Retail Marijuana Store		A	A	A		A	A	A		A	A	A		A	A	A	A
Retail Marijuana Testing Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Office, Business &amp; Professional Services</b>																	
Financial Institution		A	A	A		A	A	A		A	A	A		A	A	A	A
Professional Office		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Personal Services</b>																	

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Instructional Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
Personal Service		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Recreation &amp; Entertainment</b>																	
Campground		A	A	A		A	A	A		A	A	A		A	A	A	A
Membership Club or Clubhouse		A	A	A		A	A	A		A	A	A		A	A	A	A
Rafting Business		A	A	A		A	A	A		A	A	A		A	A	A	A
Recreation Facility, Indoor		A	A	A		A	A	A		A	A	A		A	A	A	A
Recreation Facility, Outdoor		A	A	A		A	A	A		A	A	A		A	A	A	A
Recreational Vehicle Park		A	A	A		A	A	A		A	A	A		A	A	A	A
Riding Stable	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Seasonal Camp		A	A	A		A	A	A		A	A	A		A	A	A	A
Shooting Range	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Indoor Only		A	A	A		A	A	A		A	A	A		A	A	A	A
With Outdoor Activity	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
<b>Retail Sales</b>																	
Building Material & Supply Store		A	A	A		A	A	A		A	A	A		A	A	A	A
Fireworks Sales, Permanent		A	A	A		A	A	A		A	A	A				A	A
Flea Market		A	A	A		A	A	A		A	A	A		A	A	A	A
With Outdoor Activity		A	A	A		A	A	A		A	A	A		A	A	A	A
General Retail		A	A	A		A	A	A		A	A	A		A	A	A	A
≤ 10,000 SF		A	A	A		A	A	A		A	A	A		A	A	A	A
10,000 to 25,000 SF		A	A	A		A	A	A		A	A	A		A	A	A	A
> 25,000 SF		A	A	A		A	A	A		A	A	A		A	A	A	A
Outdoor Display and Sales		A	A	A		A	A	A		A	A	A		A	A	A	A

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<b>Transportation</b>																	
Airport		A	A	A		A	A	A		A	A	A					
Fleet Services		A	A	A		A	A	A		A	A	A		A	A	A	A
Helipad		A	A	A		A	A	A		A	A	A					
Parking Lot or Garage	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Transit Terminal or Station		A	A	A		A	A	A		A	A	A					
Transportation Depot		A	A	A		A	A	A		A	A	A					
<b>Vehicles &amp; Equipment</b>																	
Truck Stop		A	A	A		A	A	A		A	A	A		A	A	A	A
Vehicle Fuel Sales		A	A	A		A	A	A		A	A	A				A	A
Vehicle Repair, Major		A	A	A		A	A	A		A	A	A				A	A
Vehicle Repair, Minor		A	A	A		A	A	A		A	A	A				A	A
Vehicle Sales & Leasing		A	A	A		A	A	A		A	A	A		A	A	A	A
Vehicle Wash		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>Adult Uses</b>																	
All		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>INDUSTRIAL USES</b>																	
<b>Manufacturing &amp; Processing</b>																	
Hazardous Materials Storage and/or Processing		A	A	A		A	A	A		A	A	A				A	A
Junkyard		A	A	A		A	A	A		A	A	A					
Landfill		A	A	A		A	A	A		A	A	A					
Manufacturing, Light		A	A	A		A	A	A		A	A	A		A	A	A	A
Manufacturing, Heavy		A	A	A		A	A	A		A	A	A		A	A	A	A

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Mining	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Oil & Gas Drilling and Production	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Recycling Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
Sawmill		A	A	A		A	A	A		A	A	A		A	A	A	A
Trade Use		A	A	A		A	A	A		A	A	A		A	A	A	A
Treatment Plant	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Utility Substation		A	A	A		A	A	A		A	A	A					
Water Storage Facility	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
<b>Storage &amp; Warehousing</b>																	
Storage, Enclosed	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Storage, Outdoor		A	A	A		A	A	A		A	A	A		A	A	A	A
Warehousing & Wholesale Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>PUBLIC &amp; SEMI-PUBLIC UTILITY USES</b>																	
Power Plant		A	A	A		A	A	A		A	A	A					
Radio & Television Transmitters		A	A	A		A	A	A		A	A	A					
Small Solar Energy Facility, Building Mounted		A	A	A		A	A	A		A	A	A		A	A	A	A
Small Solar Energy Facility, Ground Mounted		A	A	A		A	A	A		A	A	A		A	A	A	A
Small Wind Energy Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
Wireless Communication Facilities		A	A	A		A	A	A		A	A	A		A	A	A	A
Alternative Tower Structure (concealed)		A	A	A		A	A	A		A	A	A		A	A	A	A
≤ 40 feet high		A	A	A		A	A	A		A	A	A		A	A	A	A

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≤ 60 feet high		A	A	A		A	A	A		A	A	A		A	A	A	A
Attached Facility on Existing Structure		A	A	A		A	A	A		A	A	A		A	A	A	A
Small Cell Facility		A	A	A		A	A	A		A	A	A		A	A	A	A
Tower (non- concealed)		A	A	A		A	A	A		A	A	A		A	A	A	A
≤ 40 feet high		A	A	A		A	A	A		A	A	A		A	A	A	A
≤ 60 feet high		A	A	A		A	A	A		A	A	A		A	A	A	A
61-80 feet high		A	A	A		A	A	A		A	A	A		A	A	A	A
81-100 feet high		A	A	A		A	A	A		A	A	A		A	A	A	A
101- 120 feet high		A	A	A		A	A	A		A	A	A		A	A	A	A
> 120 feet high		A	A	A		A	A	A		A	A	A		A	A	A	A
<b>MIXED-USE</b>																	
Mixed-Use Structures & Additions		A	A	A		A	A	A		A	A	A				A	A
<b>CRITICAL FACILITIES</b>																	
<b>Essential Services Facilities</b>																	
Police Stations		A	A	A		A	A	A		A	A	A					
Fire and Rescue Stations		A	A	A		A	A	A		A	A	A					
Emergency Vehicle & Equipment Storage		A	A	A		A	A	A		A	A	A					
Emergency Operation Centers		A	A	A		A	A	A		A	A	A					
Hospital		A	A	A		A	A	A		A	A	A					
Ambulance Service Center		A	A	A		A	A	A		A	A	A					
Urgent Care Center		A	A	A		A	A	A		A	A	A					

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Medical or Dental Clinic		A	A	A		A	A	A		A	A	A					
Surgical Structures (non-ambulatory)		A	A	A		A	A	A		A	A	A					
Emergency Shelter		A	A	A		A	A	A		A	A	A					
Emergency Communications (Main Hubs)		A	A	A		A	A	A		A	A	A					
Public Utility Plant Facilities		A	A	A		A	A	A		A	A	A					
Emergency Air Transportation		A	A	A		A	A	A		A	A	A					
<b>Hazardous Materials Storage &amp; Production Facilities</b>																	
Chemical and Pharmaceutical Plants		A	A	A		A	A	A		A	A	A				A	A
Laboratories		A	A	A		A	A	A		A	A	A				A	A
Refineries		A	A	A		A	A	A		A	A	A				A	A
Hazardous Waste Storage and Disposal		A	A	A		A	A	A		A	A	A				A	A
Above and Below-Ground Gasoline/Propane		A	A	A		A	A	A		A	A	A				A	A
Automobile Oil/Lubrication, Repair, Paint		A	A	A		A	A	A		A	A	A				A	A
<b>At-Risk Populations Facilities</b>																	
Elder Care, Nursing Homes, Assisted Living		A	A	A		A	A	A		A	A	A					
Congregate Care, Residential Care, Group Homes		A	A	A		A	A	A		A	A	A					
Housing for Vulnerable Populations		A	A	A		A	A	A		A	A	A					

Table 12-1: Table of Allowed Uses – FPO District

A = Allowed Use Blank Cell = Prohibited Use

FLOODPLAIN	FEMA				BEST AVAILABLE				MUNICIPAL				POUDRE GMA				LARIMER COUNTY FPAS
Flood Zone	AE (FLOODWAY)	AE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR HIGH RISK (FLOODWAY)	AE OR HIGH RISK (FLOOD FRINGE)	MODERATE RISK	X (SHADED & SHADED, PROTECTED BY A LEVEE)	AE OR 1% ACE (FLOODWAY)	AE OR 1% ACE (FLOOD FRINGE)	A/AH/AO	X (SHADED & SHADED, PROTECTED BY A LEVEE)	ALL ZONES
Day Care or Childcare		A	A	A		A	A	A		A	A	A					
Public and Private Schools (K-12)		A	A	A		A	A	A		A	A	A					
Before and After- School Care		A	A	A		A	A	A		A	A	A					
Day Camp		A	A	A		A	A	A		A	A	A					
<b>At-Risk Populations Facilities</b>																	
Essential Government Operations		A	A	A		A	A	A		A	A	A				A	A
Essential Public College/ University Structures		A	A	A		A	A	A		A	A	A				A	A

### 3. Hazardous Materials

Materials which are flammable, hazardous, toxic, or explosive, or that in times of flooding could be harmful to human, animal, or plant life as determined by the County Engineer may not be produced, stored, or processed in the FPO district unless stored securely at or above the Flood Protection Elevation (FPE) within a structure that meets all applicable regulations of Article 12.0. This regulation applies for facilities where quantities of produced, stored, or processed materials equal or exceed threshold limits per the CWCB Rules and Regulations. New facilities in which quantities of produced, stored, or processed materials equal or exceed threshold limits (i.e. critical facilities) are prohibited in the Zone AE or 1% ACE flood zones of Poudre GMA Floodplain.

### 4. Service Equipment

All new and replacement plumbing, electrical, heating, ventilation, air conditioning, and other service facilities shall be located and/or designed to minimize or eliminate infiltration of flood waters into the system.



**5. Water Supply, Wastewater, and Septic Facilities**

Water supply, wastewater, and septic facilities shall be located and designed to minimize or eliminate adverse flooding impacts and infiltration of flood waters into the system. No new water treatment plants, wastewater treatment plants, or septic systems shall be constructed or installed within a floodway zone.

**6. Floodway Requirements**

New buildings or structures are prohibited in a floodway zone. Other forms of floodplain development in a floodway zone are prohibited unless the following conditions are met:

**a. No-Rise**

The floodplain development can be demonstrated through a hydraulic study and no-rise certificate, which are certified by a PE, that the development will not produce an increase(s) in BFE(s), floodway elevations or floodway widths; or

**b. CLOMR**

If the proposed floodplain development would, upon construction, increase the BFE(s) or result in the modification of the floodway zone, a Conditional Letter of Map Revision (CLOMR) must be approved by the FRB and FEMA prior to issuance of an FDP for the development.

**B. Flood Elevation Standards**

All floodplain development in the FPO District shall follow the elevation standards and requirements specified below unless explicitly stated otherwise in Article 12.0. Elevation requirements shall be applied based on the standards described below:

**1. Base Flood Elevation (BFE)**

The County Engineer shall determine the BFE which is applicable for regulatory purposes within the FPO District. The County Engineer may require and accept information from a licensed Colorado Professional Engineer (PE) to determine the Base Flood Elevation for regulatory purposes.

**2. Flood Protection Elevation (FPE)**

The FPE shall be determined as follows for each floodplain zone and critical facilities within the FPO District, unless explicitly stated otherwise:

**a. FEMA and Best Available Floodplains**

- i. Zone AE: the FPE is equal to the BFE plus 1.5 feet.
- ii. Zone A with BFE: the FPE is equal to the BFE plus 1.5 feet.
- iii. Zone A without BFE: the BFE must be determined by a PE and accepted by the County Engineer. The FPE is equal to the BFE plus 1.5 feet.
- iv. Zones AH with BFE: the FPE is equal to the BFE plus 1.5 feet.
- v. Zones AO with depths: the FPE is equal to the existing ground elevation plus the specified depth plus 1.5 feet.
- vi. Other Floodplain Zones: for any zone associated with the 1% ACE, the FPE is equal to the BFE plus 1.5 feet. The FPE shall not apply for floodplain development in zones associated with a lower frequency than the 1% ACE.

- vii. Critical Facilities: for critical facilities that are permissible, the FPE is equal to the BFE plus 2 feet in Zone AE. The FPE shall not apply for floodplain development in zones associated with a lower frequency than the 1% ACE.

**b. Municipal Floodplain**

- i. 1% ACE Zones: for any zone associated with a 1% annual chance of occurrence, the FPE is equal to the BFE plus 1.5 feet unless the Board of County Commissioners has adopted a municipal floodplain which enforces a more restrictive FPE, in which case the more restrictive applies.
- ii. Other Floodplain Zones: the FPE shall not apply for floodplain development in zones associated with a lower frequency than the 1% ACE unless the Board of County Commissioners has adopted a lower-frequency floodplain zone which enforces an FPE requirement, in which case the FPE requirement shall apply.
- iii. Critical Facilities: for critical facilities that are permissible, the FPE is equal to the BFE plus 2 feet. The FPE shall not apply for floodplain development in zones associated with a lower frequency than the 1% ACE.

**c. Poudre GMA Floodplain**

- i. 1% ACE Zones: for any zone associated with a 1% annual chance of occurrence, the FPE is equal to the BFE plus 2 feet.
- ii. Other Floodplain Zones: The FPE shall not apply for floodplain development in zones associated with a lower frequency than the 1% ACE.
- iii. Critical Facilities: New critical facilities or expansions of existing critical facilities are prohibited in Zone AE or any zone associated with a 1% ACE. Essential service and at-risk population critical facilities are prohibited in any zone associated with a 0.2% ACE.

**d. Larimer County FPAs**

All zones: the FPE is equal to the BFE plus 1.5 feet. The County Engineer shall determine the FPE where a BFE has not been determined.

**3. Vertical Datum**

All elevation data utilized for regulatory purposed shall be referenced to the North American Vertical Datum of 1988 (NAVD 88).

**C. Wet Floodproofing**

**1. Wet Floodproofing Restrictions**

Wet floodproofing is prohibited for all floodplain development except for crawlspaces or where a variance has been granted by the County Engineer.

**2. Wet Floodproofing Standards**

Wet Floodproofing must be performed in accordance with the Minimum Floodplain Regulations, Floodplain Development Standards, and all applicable requirements of Article 12.0.

**D. New Floodplain Construction****1. New Floodplain Construction**

New Floodplain Construction is defined as a proposed or unpermitted structure which is has at least two walls or is roofed and principally above ground. New Floodplain Construction also includes indoor and outdoor gas and liquid storage tanks.

**2. General Requirements**

The following requirements apply for all New Floodplain Construction in the FPO District unless explicitly stated otherwise or as determined by the County Engineer:

**a. Floodway Restriction**

New Floodplain Construction in a floodway zone is prohibited.

**b. Flood Damage Protection**

All New Floodplain Construction must be built using methods, materials, and practices that minimize flood damage. New Floodplain Construction must be designed and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy. Adequate drainage paths must be provided around New Floodplain Construction.

**c. Elevation Requirements**

All New Floodplain Construction shall have the lowest floor elevation and mechanical equipment elevation elevated at or above the FPE.

- i. FEMA Elevation Certificate. A FEMA Elevation Certificate, stamped and signed by a licensed Colorado Professional Engineer (PE) or licensed Colorado Professional Surveyor (PLS), shall be submitted at the discretion of the County Engineer demonstrating that all elevation requirements have been met. The County Engineer may require a FEMA Elevation Certificate to be submitted at any time during or after construction in accordance with his or her discretion.
- ii. LOMR-F Properties. New Floodplain Construction on a property removed from the floodplain by issuance of a Letter of Map Revision Based on Fill (LOMR-F) from FEMA must have the lowest floor elevation at or above the FPE that existed prior to the placement of fill.

**d. Fill Material Requirements**

New Floodplain Construction which requires fill material to elevate a building or structure above the existing ground must meet compaction requirements specified in the Floodplain Development Standards.

**e. Zone A Floodplain Construction**

The following requirements shall apply for new structures, additions and fixed accessory structures built within a Zone A flood zone:

- i. If a residential, commercial, or industrial structure, addition or fixed accessory structure is located within a Zone A floodplain, a hydraulic study (certified by a PE) must be submitted in accordance with the Floodplain Development

Standards which demonstrates that the proposed structure, addition or fixed accessory structure is not located in the floodway.

- ii. If a nonresidential, non-commercial, or non-industrial structure, addition or fixed accessory structure is located within 100 feet from the channel centerline of a designated flooding source for a Zone A floodplain, a hydraulic study (certified by a PE) must be submitted in accordance with the Floodplain Development Standards which demonstrates that the proposed structure, addition or fixed accessory structure is not located in the floodway. The County Engineer may also require a hydraulic study (certified by a PE) to be submitted for a structure, addition or fixed accessory structure located in a Zone A Floodplain at his or her discretion.
- iii. A structure, addition or fixed accessory structure which is located within a Zone A floodplain must meet the flood protection requirements of §12.1.5, *Floodplain Development Requirements*. If a hydraulic study (certified by a PE) is performed for a structure, addition or fixed accessory structure within a Zone A floodplain, the County Engineer may accept a BFE determination and apply floodplain requirements in accordance with the findings of the study.

### 3. Residential Structures

#### a. Poudre GMA Floodplain Restriction

New residential structures are prohibited in the Zone AE and 1% ACE zones within the Poudre GMA Floodplain.

#### b. Additions and Detached Structures

- i. Residential additions and attached structures or buildings shall have the lowest floor elevation and mechanical equipment elevation at or above the FPE unless the structure or building is not used as a habitable space and a variance for wet floodproofing is granted by the County Engineer. If the addition constitutes a Substantial Improvement, it must meet the requirements of §12.1.8, *Nonconforming Uses and Structures in the FPO District*.
- ii. Detached or accessory structures shall have the lowest floor elevation and mechanical equipment elevation at or above the FPE unless the structure is not used as a habitable space and a variance for wet floodproofing is granted by the County Engineer. Accessory dwelling units with habitable space on the second floor shall have the lowest floor elevation and mechanical equipment elevation at or above the FPE unless the lowest floor is not used as a habitable space and a variance for wet floodproofing is granted by the County Engineer.
- iii. Accessory structures which are not located in a floodway zone and do not have at least two rigid walls including, but not limited to, carports, gazebos, and picnic pavilions, may be constructed at grade and must use flood-resistant materials up to the FPE.

### 4. Nonresidential & Mixed-Use Structures

#### a. Poudre GMA Mixed-Use Restriction

New mixed-use structures are prohibited in the Zone AE and 1% ACE zones within the Poudre GMA Floodplain.

**b. Commercial & Mixed-Use Structures****i. PE Certification**

The County Engineer may require that the design for commercial structures and mixed-use structures containing commercial uses be certified by a PE to be designed and adequately anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, up to the FPE.

**ii. Dry Floodproofing**

Commercial structures and mixed-use structures containing commercial uses (including the attendant and sanitary facilities and attached garages) which utilize dry floodproofing must be designed to be watertight with walls substantially impermeable to the passage of water below the FPE. Dry floodproofing measures must be certified by a PE that the methods and materials meet this requirement, and the FEMA Floodproofing Certificate for Non-Residential Buildings must be completed and approved by the County Engineer.

**c. Additions and Detached Structures**

- i. Nonresidential additions and attached buildings or structures shall have the lowest floor elevation and mechanical equipment elevation at or above the FPE unless the building or structure is not used as a habitable space and a variance for wet floodproofing is granted by the County Engineer. If the addition constitutes a Substantial Improvement, it must meet the requirements of §12.1.8, *Nonconforming Uses and Structures in the FPO District*.
- ii. Detached or accessory structures shall have the lowest floor elevation and mechanical equipment elevation at or above the FPE unless the structure is not used as a habitable space and a variance for wet floodproofing is granted by the County Engineer. Accessory dwelling units with habitable space on the second floor shall have the lowest floor elevation and mechanical equipment elevation at or above the FPE unless the lowest floor is not used as a habitable space and a variance for wet floodproofing is granted by the County Engineer.
- iii. Accessory structures which are not located in a floodway zone and do not have at least two rigid walls including, but not limited to, carports, gazebos, and picnic pavilions, may be constructed at grade and must use flood-resistant materials up to the FPE.

**d. Agricultural Structures**

Agricultural structures shall have the lowest floor elevation and mechanical equipment elevation at or above the FPE unless a variance for wet floodproofing is granted by the County Engineer.

**5. Manufactured Homes****a. Poudre GMA Floodplain Restriction**

New manufactured homes are prohibited in the Zone AE and 1% ACE zones within the Poudre GMA Floodplain.

**b. Anchoring Requirements**

Manufactured homes shall be adequately anchored using, at minimum, over-the-top and frame ties to ground anchors as specified below:

- i. Over-the-top ties at each of the four corners, with two additional ties per side at intermediate locations, except for manufactured homes less than 50 feet long which require only one additional tie per side.
- ii. Frame ties at each corner with five additional ties per side at intermediate points, except for manufactured homes less than 50 feet long which require only four additional ties per side.
- iii. All components of a manufactured home anchoring system must be capable of carrying a force of 4800 pounds.
- iv. Any additions to the manufactured home be similarly anchored.

**c. Flood Protection**

Stands or lots on which a manufactured home is located must be elevated at or above the FPE on compacted fill in accordance with the Floodplain Development Standards.

**d. Drainage Requirement**

Stands or lots on which a manufactured home is located must provide adequate surface drainage.

**6. Liquid Propane Gas (LPG) Storage Tanks****a. LPG Placement**

Placement of a new or replacement LPG tanks or other similar storage tanks in the FPO District shall be located to minimize adverse impacts due to flooding. The County Engineer may prohibit new or replacement LPG tanks at his or her discretion if a location which is reasonably safe from adverse impacts due to flooding cannot be located on the subject property.

**b. Above-Ground Tanks**

Above-ground tanks must be placed on a concrete pad which is elevated at or above the FPE and is sufficiently anchored. If elevation of the tank conflicts with International Building Code (IBC) requirements, the IBC requirements must prevail. However, in all cases sufficient protection must be provided to the tank such that it resists the expected hydrostatic and hydrodynamic flood forces.

**c. Below-Ground Tanks**

Underground tanks must be designed and installed to resist the effects of buoyancy during high groundwater or flooding conditions. Buoyancy calculations must assume an empty tank. Anchoring of the tank is required if the empty tank alone will not counteract the calculated buoyant force.

**d. Infiltration or Accumulation**

All connections and components related to the tank or fuel system must be designed such that floodwaters cannot infiltrate or accumulate within any component of the system. Inspection ports and access covers must be sealed to prevent the entry of floodwaters or the exit of tank contents, or must extend above the FPE.

**e. Indoor Tanks**

Tanks located inside of a structure must meet all applicable requirements of Article 12.0.

**E. Critical Facilities****1. Poudre GMA Floodplain Restriction**

New critical facilities and the expansion of existing critical facilities are prohibited within the Zone AE and 1% ACE zones within the Poudre GMA Floodplain. New critical facilities and expansion of existing critical facilities designated as Essential Service Facilities or At-Risk Population Facilities are also prohibited in the Zone X (Shaded), Zone X (Shaded, Protected by a Levee), and 0.2% ACE zones within the Poudre GMA Floodplain.

**2. Flood Protection.**

All new and substantially improved critical facilities and new additions to critical facilities located within the FPO District shall be regulated to a higher standard than structures not determined to be critical facilities. Protection shall include the lowest floor elevation to be raised at least two feet above the BFE or dry floodproofing to at least two feet above the BFE. Protection may include the location of the facility outside the FPO District.

**3. Ingress and Egress**

New Critical Facilities shall, when practicable as determined by the County Engineer, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 1% ACE flood event.

**4. Critical Facility Classification**

Critical facilities are classified under the following categories:

**a. Essential Services Facilities**

Essential services facilities are for the provision of services needed before, during and after a flood event to protect public health and safety. Facilities classified as essential services include public safety, emergency response, emergency medical, designated emergency shelters, communications, public utility plant facilities, and transportation lifelines. These facilities consist of:

- i. Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage, and emergency operation centers)
- ii. Emergency medical (hospitals, ambulance service centers, urgent care centers having emergency treatment functions, and non-ambulatory surgical structures but excluding clinics, doctors' offices, and non-urgent care medical structures that do not provide these functions)
- iii. Designated emergency shelters
- iv. Communications (main hubs for telephone, broadcasting equipment for cable systems, satellite dish systems, cellular systems, television, radio, and other emergency warning systems, but excluding towers, poles, lines, cables, and conduits)
- v. Public utility plant facilities for generation and distribution (hubs, treatment plants, substations, and pumping stations for water, power, and gas, but not



including towers, poles, power lines, buried pipelines, transmission lines, distribution lines, and service lines), and

- vi. Air Transportation lifelines (airports (municipal and larger), helicopter pads and structures serving emergency functions, and associated infrastructure (aviation control towers, air traffic control centers, and emergency equipment aircraft hangars).

**vii. Exemptions**

Specific exemptions to this category are included in the following list. Owners of these facilities are encouraged to meet the spirit of Article 12.0 when practicable to protect their own infrastructure and to avoid system failures during extreme flood events. These exemptions shall not apply to buildings or other structures that also function as Critical Facilities under another category outlined in Article.

- 1) Wastewater treatment plants (WWTP)
- 2) Non-potable water treatment and distribution systems, and
- 3) Hydroelectric power generating plants and related appurtenances.
- 4) Parallel-connected solar and wind power generation

Prior to obtaining an FDP or beginning operation, exempt facilities are required to submit an Operation and Maintenance Plan and an Emergency Restoring Plan which adequately demonstrate how operations will be restored following major flood events for those facilities. Public utility plant facilities may be exempted from this requirement if it is demonstrated that the facility is an element of a redundant system for which service will not be interrupted during a flood. Evidence of ongoing redundancy shall be provided to the County Engineer on an as-needed basis upon request by the County Engineer.

**b. Hazardous Materials Facilities**

Hazardous Materials Facilities include facilities that produce or store volatile, flammable, explosive, toxic and/or water-reactive materials in excess of threshold limits as stated in the CWCB Rules and Regulations and include:

- i. Chemical and pharmaceutical plants (chemical plant, pharmaceutical manufacturing)
- ii. Laboratories containing highly volatile, flammable, explosive, toxic and/or water-reactive materials.
- iii. Refineries
- iv. Hazardous waste storage and disposal sites, and
- v. Above and below-ground gasoline or propane storage or sales centers.
- vi. Automobile oil and lubrication, repair, or paint facilities
- vii. Cemeteries (Poudre GMA Floodplain only)

**viii. Exemptions**

Specific exemptions to this category include the following list. These exemptions shall not apply to buildings or structures that also function as Critical Facilities under another category outlined in Article 12.0.

- 1) Facilities containing finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use.
- 2) Structures containing hazardous materials for which it can be demonstrated by hazard assessment and certification by a qualified professional (as determined by the County Engineer) that a release of the subject hazardous material does not pose a major threat to the public.
- 3) Pharmaceutical sales, use, storage, and distribution centers that do not manufacture pharmaceutical products.
- 4) Hazardous materials facilities are not prohibited in 0.2% annual chance (500-year) flood zones in the Poudre GMA Floodplain.

**c. At-Risk Population Facilities**

At-Risk Population Facilities include facilities that house, provide shelter, or provide services to children, the infirm, or other persons requiring special assistance, care, or life support. Such facilities include, but are not limited to, the following:

- i. Hospitals
- ii. Non-ambulatory surgery centers
- iii. Elder care, nursing homes and assisted living facilities.
- iv. Congregate care facilities, residential care facilities and group homes
- v. Housing intended for occupants who may not be sufficiently mobile to avoid death or injury during a flood without special assistance.
- vi. Day care and childcare facilities
- vii. Public and private schools for all grade levels below high-school graduation
- viii. Before-school and after-school care facilities and summer day-camp facilities

**d. Facilities Vital to Restoring Normal Services**

- i. Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance, and equipment centers) and
- ii. Essential structures for public colleges and universities, community colleges, and vocational schools (dormitories, offices, laboratories, and classrooms only).

**iii. Exemptions**

Specific exemptions to this category include the following list.

- 1) Facilities may be exempted if it is demonstrated that the facility is an element of a redundant system for which service will not be interrupted during a flood. Evidence of ongoing redundancy shall be provided to the County Engineer on an as-needed basis upon request by the County Engineer.
- 2) Facilities vital to restoring normal services are not prohibited in 0.2% ACE (500-year) zones in the Poudre GMA Floodplain.

**F. Recreational Vehicles (RVs) and RV Parks**

**1. RV Requirements**

Recreational vehicles must meet the floodplain requirements for manufactured homes in §12.1.5.D, *New Floodplain Construction*, unless the RV is:

- a. Located on the site for fewer than 180 consecutive days and
- b. Fully operable, licensed, and ready for highway use as determined by the County Engineer. To be considered fully operable and ready for highway use, the RV must be on its wheels or jacking system, able to be self-propelled or towed quickly from the site, attached to the site only by quick-disconnect utilities, and have no permanently attached additions.

**2. Fee- based RV Parks**

Fee-based RV parks must meet the following requirements in addition to §12.1.5.A, *General Requirements*:

- a. Stands, lots, or sites on which an RV is located must be elevated at or above the FPE on compacted fill in accordance with the Floodplain Development Standards
- b. Stands or lots must provide adequate surface drainage.
- c. If RVs will be located on sites longer than 180 days, RVs and RV sites must meet floodplain requirements for manufactured homes in §12.1.5.D.5.

**G. Campgrounds**

Campgrounds must meet the following requirements:

**1. Flood Protection**

Camping sites or locations must be elevated at or above the FPE on compacted fill in accordance with the Floodplain Development Standards.

**2. Emergency Operation Plan (EOP)**

An EOP must be submitted prior to obtaining a permit which demonstrates reasonable flood safety and evacuation practices in event of a flood.

**3. Length of Stay Restriction**

Visitors shall not remain on the site longer than 180 consecutive days.

**4. Drainage Requirement**

Stands or lots must provide adequate surface drainage.

**H. Outdoor Storage**

Outdoor storage sites must meet the following requirements:

**1. Flood Protection**

Outdoor storage sites must be elevated at or above the BFE on compacted fill in accordance with the Floodplain Development Standards.

**2. Hazardous & Floatable Materials**

Outdoor storage sites shall be used solely for the storage of materials which are not considered hazardous (per §12.1.5.A) or floatable and do not violate other sections of this Code.

**3. Drainage Requirement**

Outdoor storage sites must provide adequate surface drainage.

**I. Electrical Facilities**

Cellular towers, transformers, solar panels, overhead electric poles, signs with electrical components, and other electrical facilities shall ensure that all electrical components are adequately floodproofed to an elevation at or above the FPE to eliminate infiltration of flood waters into the system.

**J. Fixed Accessory Features and Facilities**

Decks, fences, carports, gazebos, pergolas, fire pits, stairs, benches, sculptures, pillars/columns, or other accessories to a structure which are permanently fixed to the ground or structure shall meet the following requirements:

1. Fixed accessory features shall not be located within a designated floodway zone unless the requirements of §12.1.5, Floodplain Development Requirements, are met. The County Engineer may require that new or unpermitted features be reviewed by the Flood Review Board prior to issuance of an FDP.
2. Fixed accessory structures shall meet the requirements under §12.1.5.D.2.e, *Zone A Floodplain Construction*, if within a Zone A floodplain.
3. Decks attached or accessory to a non-residential structure shall have the surface raised to an elevation at or above the FPE. The design shall be certified by a PE and demonstrate that:
  - a. The structure is adequately anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
  - b. The foundation, footings, and/or structural supports are adequately protected from scour due to flood forces at the design frequency deemed appropriate by the County Engineer.

**K. Shipping or Storage Containers**

Shipping or storage containers shall meet the following requirements:

**1. Floodway Restriction**

Placement of shipping or storage containers in a floodway zone is prohibited.

**2. Anchoring**

Shipping and storage containers shall be adequately anchored using, at minimum, over-the-top ties to ground anchors as specified below:

- a. Over-the-top ties at each of the four corners, with two additional ties per side at intermediate locations, except for shipping or storage containers less than 50 feet long which require only one additional tie per side.
- b. All components of a shipping or storage container anchoring system must be capable of carrying a force of 4800 pounds.

**3. Flood Protection**

Sites or pads on which a shipping or storage container is located must be elevated at or above the BFE on compacted fill in accordance with the Floodplain Development Standards.

**4. Drainage Requirement**

Stands or lots on which a shipping or storage container is located must provide adequate surface drainage.

**5. Habitable Space Restriction**

Shipping and storage containers may not be used as a habitable space.

**L. Temporary Structures or Facilities**

FDPs may be issued for temporary structures or facilities in the FPO District if they meet the following criteria:

**1. Flood Protection**

The County Engineer may require that the temporary structure or facility and any associated equipment or materials be adequately anchored to prevent flotation, collapse, or lateral movement in event of a flood.

**2. No Permanent Attachments**

No permanent attachments or affixtures may be constructed or installed to the temporary structure or facility.

**3. No Permanent Alterations**

No permanent alterations are allowed for a temporary structure or facility. Prohibited activities may include, but are not limited to, mining, dredging, filling, grading, paving, excavating, or drilling operations.

**4. Time Limit**

The structure or facility shall not remain longer than a period of 90 consecutive days. One extension of up to 90 days may be granted at the discretion of the County Engineer.

**M. Repairs and Improvements****1. Substantial Damage & Substantial Improvement Determination**

A structure which requires repairs or to which improvements are proposed, including reconstruction, rehabilitation, addition, or other improvements, of which the cumulative cost over a five year period equals or exceeds 50 percent of the structure's valuation shall be considered a Substantially Damaged or Substantially Improved Structure. A Substantially Damaged or Substantially Improved Structure must meet all applicable floodplain regulations under Article 12.0 in effect at the time that the floodplain development is proposed unless a variance is granted by the County Engineer.

**2. Costs**

The costs for labor and materials required for the repairs or improvements to a structure must be submitted to the County Engineer in a cost estimate and supported by contractor and owner affidavits per the Floodplain Development Standards. The requirement for contractor affidavits may be waived at the discretion of the County Engineer. The costs for repairs and/or improvements to a structure shall be cumulatively added over a five year period prior to the approval date of the FDP for said repairs and/or improvements, but not including work prior to January 1, 2021. The costs must be deemed to be reasonable in accordance with the fair-market value by the County Engineer.

**3. Structure Valuation**

The valuation of the structure to which repairs or improvements are made must be deemed to be reasonable in accordance with the fair-market value by the County Engineer, supported by an appraisal from a licensed Colorado Real Estate Appraiser or Larimer County Assessor records, and be current within one year of the start of construction.

**4. Cost Exclusions**

The costs of repairs and/or improvements which meet the following criteria shall not be included in the substantial damage and/or substantial improvement determination:

- a. Repairs and/or improvements which are not associated with flood damage and are made to correct existing violations of state or local health, sanitary, building or safety code specifications which have been identified by the County Engineer and which are the minimum necessary to assure safe living conditions.
- b. Repairs and/or improvements which are made to a historic structure which has been designated by the National Register of Historic Places or State of Colorado and will not preclude the structure's continued designation as a historic structure. Entitlement to such an exemption requires that the applicant provide documentation that:
  - i. The building or structure is designated as a historic structure and
  - ii. Confirms that the proposed work will not preclude the structure's continued historic designation.

**5. Substantial Damage/Improvement Requirements**

Structures which are substantially damaged and/or substantially improved shall meet all applicable requirements of Article 12.0 that are effective at the time of the determination by the County Engineer.

**6. Critical Facilities**

Substantial Improvements of and expansions to existing critical facilities shall follow the requirements of the CWCB Rules and Regulations. Substantial Improvements and expansions to existing critical facilities are prohibited in the Poudre GMA Floodplain except for Hazardous Material Facilities and Facilities Vital to Restoring Normal Services in the Zone X (Shaded), Zone X (Shaded, Protected by a Levee), and 0.2% ACE zones.

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**12.1.6. Flood Review Board****A. Purpose**

The Flood Review Board (FRB) exists to make recommendations to the County Engineer regarding floodplain development, variances to and interpretations of Article 12.0, map amendment proposals, and Floodplain Project Reviews within the FPO District.

**B. Structure**

- 1. The FRB is appointed by the Board of County Commissioners
- 2. The FRB shall contain five to seven (5-7) members.
- 3. The FRB shall select one chairperson annually.
- 4. The FRB must have at least three members present to achieve a quorum and conduct business.

**C. Powers**

The Flood Review Board (FRB) is authorized to make recommendations to the County Engineer regarding:

1. Variance requests to Article 12.0 of this Code
2. Interpretations of Article 12.0 of this Code
3. Map Amendments
4. Floodplain Project Reviews (FPR)
5. Guidance related to floodplain development, floodplain construction methods, flood safety, or other flood-related topics.

**D. Hearing Procedure****1. Initiating Review**

To initiate review by the FRB, the applicant must submit an application and along with all applicable submittal requirements per the Floodplain Development Standards.

**2. Hearing Schedule Deadline**

A hearing before the FRB shall be scheduled within 60 days from the date on which the application is determined complete by the County Engineer. The applicant shall be notified in writing of the date, time, and location of the hearing.

**3. Public Notice**

Notice of the hearing must be published at least 14 days prior to the hearing in a newspaper of general circulation within Larimer County. The notice must designate the date, time, and location of the hearing, the location of the subject property under review, and the nature of the review for which the applicant is applying. Written notice may be mailed to any surrounding property owners at the discretion of the County Engineer. The mailing of such notices is discretionary and failure to receive a notice does not affect the validity of the hearing before the FRB.

**4. FRB Recommendation**

At the conclusion of the hearing, the FRB shall make its recommendation to the County Engineer or table an item to a future date to allow the applicant to resolve issues which are identified. The FRB shall make its recommendation based on the evidence and information presented and by the applicable criteria, standards, and requirements in Article 12.0 of this Code.

**5. Conditions**

The FRB may recommend, and the County Engineer may require, that conditions be attached to a recommendation to further the purpose and objectives of Article 12.0.

**6. Appeals**

Any person or persons aggrieved by the County Engineer's decision regarding a variance, interpretation, map amendment, or Floodplain Project Review may appeal the decision to the County Commissioners.

**7. Professional Engineer Representation**

The FRB or the County Engineer may require the applicant to be represented by a licensed Colorado Professional Engineer (PE) who can address technical matters.



**E. Variances****1. FRB Review**

The FRB shall hear and make recommendations to the County Engineer for variance requests to the requirements of Article 12.0 unless the variance may be granted administratively by the County Engineer. The County Engineer may require any variance request to be reviewed by the FRB.

**2. Variance Approval Criteria**

Variance requests shall be evaluated based on the following criteria:

- a. The completeness and technical adequacy of the variance request and associated materials in accordance with:
  - i. Article 12.0 of this Code
  - ii. Larimer County Floodplain Development Standards
  - iii. Sound engineering judgment of FRB members
- b. The probability that granting the variance will result in unreasonable risk of harm to people or property, both onsite and in the surrounding area
- c. The safety of access to and from the subject property during flood events
- d. The availability of alternatives having a reduced risk of flooding impacts.
- e. Exceptional or undue hardship which would be experienced by the property owner through strict application of Article 12.0.
- f. Impacts due to scour and erosion.
- g. The impacts that approval of the variance will have on the:
  - i. Flood profile and flood heights (1% ACE)
  - ii. Floodway
  - iii. Stability of the channel and/or sedimentation
  - iv. Existing structures, roads, bridges, or other infrastructure
  - v. Lands upstream, downstream, and in the immediate vicinity of the floodplain development
  - vi. Ecosystem(s) associated with the watercourse, including the streambank and streamside vegetation.

**3. Abrogation**

Variances granted to Article 12.0 do not remove or relieve the requirements set forth in other sections of this Code.

**4. Records**

The County Engineer shall maintain a record of actions and recommendations involving a variance request and shall report variances to the Federal Emergency Management Agency and/or the Colorado Water Conservation Board upon request.

**F. Interpretations**

The FRB may hear and make recommendations to the County Engineer for requests to make interpretations of Article 12.0 of this Code.

**G. Map Amendments****1. FRB Review**

The FRB shall hear and make recommendations to the County Engineer regarding approval of FEMA's Overview and Concurrence Form for map amendment requests such as Letters of Map Revision (LOMRs) and Conditional Letters of Map Revision (CLOMRs) within the FPO District.

**2. Map Amendment Approval Criteria**

Map amendment requests shall be evaluated based on the following criteria:

- a. The completeness and technical adequacy of the map amendment request and associated materials submitted with the request in accordance with the:
  - i. FEMA Guidelines and Specifications for Flood Hazard Mapping Partners
  - ii. Article 12.0 of this Code
  - iii. Larimer County Floodplain Development Standards
  - iv. Sound engineering judgment of FRB members
- b. The impacts that approval of the map amendment request will have on the:
  - i. Flood profile, flood heights, and floodplain boundaries (1% ACE)
  - ii. Floodway
  - iii. Existing structures, roads, bridges, or other infrastructure
  - iv. Lands upstream, downstream, and in the immediate vicinity of the study limits of the map amendment request

**3. Map Amendment Cost**

Where an applicant for a map change proposes a project which will result in changes to the FPO District boundaries, the applicant shall be responsible for the cost of preparing maps and any technical studies necessary for submittal to FEMA for a CLOMR or LOMR.

**4. FDP Issuance**

The FDP or building permit shall not be issued until FEMA has indicated the information is acceptable and has issued a CLOMR. The applicant shall pay any costs incurred to revise information submitted to FEMA to make it acceptable.

**5. Appeals**

Any person or persons aggrieved by a decision regarding an FPR may appeal the recommendation to the County Commissioners.

**H. Floodplain Project Review****1. FRB Review**

The FRB shall hear and make recommendations to the County Engineer regarding approval of Floodplain Project Review (FPR) requests within the FPO District. FPRs shall include:

- a. New or replacement bridges, roads, or other infrastructure which cross a stream channel, as determined by the County Engineer.
- b. New or replacement water control structures which are determined to be hydraulically significant by the County Engineer.

- c. New or replacement marinas, docks, piers, wharves, or other floodplain development determined by the County Engineer to require special consideration by the FRB.

## 2. FPR Approval Criteria

FPR requests shall be evaluated based on the following criteria:

- a. The completeness and technical adequacy of the FPR in accordance with:
  - i. Article 12.0 of this Code
  - ii. Larimer County Floodplain Development Standards
  - iii. Sound engineering judgment of FRB members
- b. The probability that granting approval of the FPR will result in unreasonable risk of harm to people or property, both onsite and in the surrounding area
- c. The safety of access to and from the subject property during flood events
- d. The availability of alternatives having a reduced risk of flooding impacts.
- e. Impacts due to scour and erosion.
- f. The impacts that approval of the FPR will have on the:
  - i. Flood profile and flood heights (1% ACE)
  - ii. Floodway
  - iii. Stability of the channel and/or sedimentation
  - iv. Existing structures, roads, bridges, or other infrastructure
  - v. Lands upstream, downstream, and in the immediate vicinity of the floodplain development
  - vi. Ecosystem(s) associated with the watercourse, including the streambank and streamside vegetation.

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### 12.1.7. Wet Floodproofing

#### A. Wet Floodproofing Variance Eligibility

Enclosures, additions or attached structures, accessory or detached structures, and agricultural structures in the FPO District which do not meet elevation requirements of §12.1.5, *Floodplain Development Requirements* may be eligible for an administrative variance to be wet floodproofed if the following requirements are met:

1. Non-agricultural structures are only eligible if used solely for parking of vehicles, building access, or storage of materials.
2. Agricultural structures are only eligible if used solely for the production, harvesting, storage, drying, or raising of agricultural commodities (including livestock).

#### B. Wet Floodproofing Requirements

For buildings or structures which are permitted to be wet floodproofed, floodproofing designs must meet the following criteria:

##### 1. Floodproofing Design & Materials

- a. Buildings and structures which are wet floodproofed shall follow FEMA Guidance and other applicable Floodplain Development Standards.

- b. Wet floodproofing measures must be designed to equalize the hydrostatic and hydrodynamic flood forces on exterior walls by allowing for the entry and exit of floodwaters.
- c. Buildings and structures which are wet floodproofed shall provide flood-resistant materials to an elevation at or above the FPE.
- d. The County Engineer may require a wet floodproofing design to be certified by a PE at his or her discretion.

**2. Flood Venting Requirements**

- a. A minimum of two openings on at least two walls having a total net area of at least one square inch of open area for every square foot of enclosed area subject to flooding. The minimum opening requirement may be reduced if engineered venting is provided and certified by a PE.
- b. The bottom of all openings must be no higher than one foot above grade.
- c. Openings must permit the automatic entry and exit of floodwaters.
- d. Required openings may be installed in garage doors. However, the garage door itself does not qualify as an opening for wet floodproofing purposes.

**3. No Appliances**

The structure must have no permanently affixed appliances including, but not limited to, furnaces, heaters, washers, and dryers.

**4. Non-Conversion Agreement**

The County Engineer may require, at his or her discretion, that the property owner execute and record a Non-Conversion Agreement stating that the use of the structure or applicable portion of the structure will not be modified in the future prior to issuance of the Certificate of Occupancy. The agreement must run with the land and bind successors in perpetuity. Violation of the agreement will be considered a violation of Article 12.0 and will be subject to enforcement under §1.9, *Enforcement*.

**C. Wet Floodproofing Variance Approval Criteria**

Wet floodproofing variance requests shall be evaluated based on the following criteria:

- 1. The completeness and technical adequacy of the variance request and associated materials in accordance with:
  - a. Article 12.0 of this Code
  - b. Larimer County Floodplain Development Standards
  - c. Sound engineering judgment
- 2. The probability that granting the variance will result in unreasonable risk of harm to people or property, both onsite and in the surrounding area.
- 3. The safety of access to and from the subject property during flood events.
- 4. The availability and feasibility of alternatives having a reduced risk of flooding impacts.
- 5. Exceptional or undue hardship which would be experienced by the property owner if the variance is not granted.

**D. Abrogation**

Wet floodproofing variances which are approved do not remove or relieve the requirements set forth in other sections of this Code.

**E. Appeals**

Any person or persons aggrieved by a decision regarding a wet floodproofing variance may appeal the recommendation to the County Commissioners.

**F. Conditions**

The County Engineer may require that conditions be attached to the granting of wet floodproofing variances as he or she deems necessary to further the purpose and objectives of Article 12.0.

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**12.1.8. Nonconforming Uses and Structures in the FPO District**
**A. Principles of Construction**

This subsection is to be read in conjunction with §1.10, *Nonconformities*. This subsection does not supersede §1.10 in its entirety but establishes additional requirements for nonconforming structures and uses located in the FPO District. If a conflict arises between the requirements of this subsection and the provisions of §1.10, the requirements of this subsection control.

**B. Nonconforming Uses and Change of Use Requirements****1. Nonconforming Use Continuation**

Any building or structure within the FPO District that was lawfully established before the adoption or amendment of Article 12.0 but that does not conform to the current requirements of Article 12.0 may be continued subject to the provisions of this Code.

**2. Change in Use Requirements**

A change in use of a structure to a use which is not a permitted use under Table 12-1 will require that the entire structure meet all the current and applicable requirements of Article 12.0 as determined by the County Engineer. If a change in use is proposed for a structure located within 100 feet from the channel centerline of a designated flooding source in a Zone A floodplain, a hydraulic study (certified by a PE) must be submitted in accordance with the Floodplain Development Standards which demonstrates that the proposed structure is not located in the floodway. If the structure is demonstrated to be in the floodway, the proposed use must be an allowable use in the floodway zone per Table 12-1 and meet all applicable requirements of Article 12.0 as determined by the County Engineer. The County Engineer may also require a hydraulic study (certified by a PE) to be submitted for a change in use of a structure located in a Zone A floodplain at their discretion.

**3. Change in Use Variance**

A variance may be sought to modify or waive the requirements of Article 12.0 for a change in use through a request to the Flood Review Board. To receive approval, the variance request must meet all applicable criteria of §12.1.6.E, *Variances* and the following conditions:

- a. The existing structure must be determined to be structurally sound by a licensed Colorado Professional Engineer (PE).
- b. The work associated with the change of use must not be deemed a Substantial Improvement or repair of Substantial Damage.

- c. The proposed use to which the structure, or portion of the structure, will be changed shall not be a use which is determined to be more intensive by the Flood Review Board or increase human use or occupation of the structure(s).
- d. The proposed use to which the structure, or portion of the structure, will be changed must be allowable in the zoning district applicable to the property.
- e. The granting of the change in use shall not create a conflict with other sections of this Code.

**C. Nonconforming Structures in a Flood Fringe Zone or Flood Zone Not Containing a Floodway**

**1. Regulatory Compliance**

A nonconforming structure in a flood fringe zone [e.g. Zone AE (Flood Fringe) or 1% ACE (Flood Fringe)] may not be expanded, improved, repaired, relocated, restored, or replaced unless the work complies with this subsection.

**2. Flood Elevation Amendments**

If the regulatory Base Flood Elevation (BFE) or Flood Protection Elevation (FPE) is amended to a higher BFE and/or FPE such that a structure becomes nonconforming, the higher BFE and FPE will apply to subsequent permit applications if the work constitutes a Substantial Improvement or repair of Substantial Damage.

**3. Additions to Nonconforming Structures**

Additions to or expansions of a nonconforming structure shall have the lowest floor elevation and mechanical equipment elevation at or above the FPE unless it is not used as a habitable space and a variance for wet floodproofing is granted by the County Engineer. If the addition constitutes a Substantial Improvement, the lowest floor elevation of the entire structure and mechanical equipment elevation must be raised at or above the FPE unless an alternative design is provided (certified by a PE) which follows FEMA Guidance and meets all applicable requirements of Article 12.0. Additions or expansions of residential or mixed-use structures are prohibited in the Zone AE or 1% ACE flood zones of the Poudre GMA Floodplain.

**4. Substantial Improvement and Substantial Damage**

Owners of existing nonconforming structures must follow the requirements for repairs and improvements under §12.1.5.M, *Repairs and Improvements* to determine if the work constitutes a Substantial Improvement or repair of Substantial Damage. Where an owner of a nonconforming structure in a flood fringe zone proposes a Substantial Improvement or repair of Substantial Damage, the owner shall complete a relocation evaluation prior to retrofitting or repairs as described below. The County Engineer may require, at his or her discretion, that the proposal be reviewed by the Flood Review Board.

**a. Relocation Evaluation**

The owner must first evaluate the feasibility of relocating the nonconforming building or structure to a less hazardous location on the property. The following requirements shall apply to the relocation evaluation:

- i. Any relocation must be reviewed and approved by the County Engineer.

- ii. Relocation is subject to other provisions of Article 12.0 including, but without limitation to, setback, building permit, and zoning requirements.

**b. Retrofitting Existing Buildings**

- i. The entire building or structure must be brought into compliance with the requirements of Article 12.0.
- ii. All retrofitting designs, methods, and techniques must follow applicable FEMA Guidance and Floodplain Development Standards.
- iii. The County Engineer may require at his or her discretion require that retrofitting designs, methods, and techniques be certified by a PE.
- iv. Structures which meet the provisions of §12.1.7, *Wet Floodproofing* may be eligible for an administrative variance to be wet floodproofed at the discretion of the County Engineer.

**c. Repair or Replacement of Substantially Damaged Structures**

- i. The entire building or structure must be brought into compliance with the requirements of Article 12.0.
- ii. The County Engineer may require at his or her discretion that the building or structure design be certified by a PE.
- iii. Structures which meet the provisions of §12.1.7, *Wet Floodproofing* may be eligible for an administrative variance to be wet floodproofed at the discretion of the County Engineer.

**D. Nonconforming Structures in a Floodway Zone**

**1. Regulatory Compliance**

A nonconforming structure in a floodway zone may not be improved, repaired, relocated, restored, or replaced unless the work complies with this subsection.

**2. No Expansion**

A nonconforming structure in a floodway zone may not be expanded by addition of square footage, footprint, or habitable space.

**3. Substantial Improvement and Substantial Damage**

A Substantial Improvement is prohibited in a floodway zone. A repair of Substantial Damage is prohibited in a floodway zone unless the damage was caused by an event other than a flood or it meets the provisions of this subsection. Owners of existing nonconforming structures must follow requirements for repairs and improvements under §12.1.5.M, *Repairs and Improvements* to determine if the work constitutes a Substantial Improvement or repair of Substantial Damage. Where an owner of a nonconforming structure in a floodway zone proposes repair of Substantial Damage, the owner shall complete a relocation evaluation prior to retrofitting or repair/replacement as described below:

**a. Relocation Evaluation**

The owner must first evaluate the feasibility of relocating the nonconforming building or structure outside of the floodway zone and to a location which minimizes flood risk. The following requirements shall apply to the relocation evaluation:

- i. Any relocation must be reviewed and approved by the County Engineer.



- ii. Relocation is subject to other provisions of Article 12.0 including, but without limitation to, setback, building permit, and zoning requirements.

**b. Retrofitting Existing Buildings**

- i. In addition to requiring conformance with the flood protection measures in §12.1.5, *Floodplain Development Requirements*, the County Engineer may require one or more of the following retrofitting techniques to protect the structure from flooding as well as scour and erosion, debris impact, and other hazards associated with floodways:
  - 1) Elevation using posts, columns, or piles.
    - (a) Posts or columns must be placed in drilled or excavated holes or piles must be driven into the ground.
    - (b) Posts or columns must be encased in concrete and include a footer.
    - (c) Posts, columns, and piles must be sufficiently anchored to resist hydrodynamic and hydrostatic flood forces (1% ACE).
  - 2) Elevation using stem walls parallel to the direction of flow.
    - (a) Water must be allowed to flow freely between stem walls.
    - (b) Footers must be designed and installed to protect against scour due to flooding.
    - (c) Other techniques may be required as determined by the County Engineer.
- ii. All retrofitting designs, methods, and techniques must follow applicable FEMA Guidance and Floodplain Development Standards.
- iii. The County Engineer may require at his or her discretion that retrofitting designs, methods, and techniques be certified by a PE.

**c. Repair or Replacement of Substantially Damaged Structures**

If relocation and retrofitting are not feasible options (as determined by the County Engineer) for a Substantially Damaged Structure in a floodway zone, repairs or replacement of the damaged structure may be sought through a request to the Flood Review Board. The County Engineer, at their discretion, may waive the Flood Review Board process. To receive approval, the request must meet all applicable criteria of §12.1.6.E, *Variances* and the following conditions:

- i. The damage must have been caused by an event other than a flood or, if the damage was caused by a flood, a hydraulic study (certified by a PE) must be submitted which demonstrates that the product of the flood depth and velocity associated with the 1% ACE for the structure and the area surrounding the structure is less than or equal to 8.0 square feet per second.
- ii. The repairs or replacement of a Substantially Damaged Structure in a floodway zone must be within the footprint of the existing structure.
- iii. The repairs or replacement of a Substantially Damaged Structure in a floodway zone must result in the new structure having its lowest floor elevation and mechanical equipment elevation raised at least 24 inches above the BFE.



- iv. The design for the repairs or replacement of a Substantially Damaged Structure must follow applicable FEMA Guidance and Floodplain Development Standards. The design must be certified by a PE and shall demonstrate that the structure is safe and stable (in accordance with standard engineering practice) and able to withstand flood forces from the 1% ACE.
- v. A hydraulic study, certified by a licensed PE, must be submitted demonstrating that the repaired or replaced structure is not at risk of adverse impacts due to erosion or scour.
- vi. Access to and from the residence shall be evaluated for safety.
- vii. The applicant shall have five years from the date of loss to complete the repairs or replacement. At the expiration of the five-year period, the applicant may petition the County Engineer for a single one-year extension.

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### 12.1.9. Definitions

#### **1% Annual Chance Event (1% ACE)**

A flood event having a 1-percent chance of being equaled or exceeded during any given year (commonly called the 100-Year Flood).

#### **0.2% Annual Chance Event (0.2% ACE)**

A flood event having a 0.2-percent chance of being equaled or exceeded during any given year (commonly called the 500-Year Flood).

#### **100-Year Flood**

A flood event having a 1-percent chance of being equaled or exceeded during any given year. The term does not imply that the flood will necessarily happen once every 100 years.

#### **500-Year Flood**

A flood event having a 0.2-percent chance of being equaled or exceeded during any given year. The term does not imply that the flood will necessarily happen once every 500 years.

#### **100-Year Floodplain**

The area of land susceptible to being inundated by the 1% Annual Chance Event (100-Year Flood).

#### **500-Year Floodplain**

The area of land susceptible to being inundated by the 0.2% Annual Chance Event (500-year Flood).

#### **Addition**

For purposes of floodplain regulation, an addition includes any expansion of the enclosed footprint or increase on the square footage of an existing structure.

#### **Agricultural Structures**

For purposes of floodplain regulation, agricultural structures include those utilized for the production, harvesting, storage, drying, or raising of agricultural commodities (including livestock). Agricultural structures do not include structures which are used wholly or partly as a habitable space.

#### **Alluvial Fan**

A fan-shaped sediment deposit formed by a stream that flows from a steep mountain valley or gorge onto a plain or the junction of a tributary stream with the main stream. Alluvial fans contain active stream channels and boulder bars, and recently abandoned channels. Alluvial fans are predominantly formed by alluvial deposits and are modified by infrequent sheet flood, channel avulsions and other stream processes.

**Accessory or Detached Structure**

For the purposes of floodplain regulation, an accessory or detached structure is a structure having a use which is incidental to the use of the principal or primary building on the same parcel of property. Examples include, but are not limited to, detached garages, storage sheds, barns, boathouses, and pavilions.

**Alteration of a Watercourse**

The manmade alteration of a watercourse such that the post-project location, orientation, or principal flow direction of the watercourse differs from the pre-project location, orientation, or principal flow direction of the watercourse.

**Base Flood**

The flood which has a 1% chance of being equaled or exceeded in any given year (also known as the 100-year flood or 1% ACE). This term is used in the National Flood Insurance Program (NFIP) to indicate the minimum level of flooding to be used by a community in its floodplain management regulations.

**Base Flood Elevation**

The water surface elevation for the flood event associated with a 1% chance of being equaled or exceeded in any given year.

**Basement**

For purposes of floodplain regulation, a basement is the interior space between the elevated finished floor of a building and the finished interior grade where the finished grade is below ground level, greater than 4 feet below the top of the foundation walls, and greater than 2 feet below the Lowest Adjacent Grade (LAG) on all sides.

**Building**

For purposes of floodplain regulation, a building is a structure which has at least two walls or is roofed and is principally above ground.

**Campground**

Site used for recreational camping, travel, or seasonal use and not used as a permanent living area.

**Channel**

The physical confine of a natural or artificial stream or watercourse consisting of a bed and stream banks, existing in a variety of geometries.

**Channelization**

The artificial creation, enlargement, or realignment of a stream channel.

**Code of Federal Regulations (CFR)**

The codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the federal government. It is divided into 50 titles that represent broad areas subject to federal regulation.

**Completion of Construction**

Date on which the project is fit to be used for or serve its intended purpose.

**Conditional Letter of Map Revision (CLOMR)**

FEMA's comment on a proposed project, which does not revise an effective floodplain map, that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodplain.

**Crawlspace**

For purposes of floodplain regulation, a crawlspace is the interior space between the elevated finished floor of a building and the finished interior grade where the finished grade is below ground level, no greater than 4 feet below the top of the foundation walls, and no greater than 2 feet below the Lowest Adjacent Grade (LAG) on all sides.

**Critical Facility**

A structure or related infrastructure (but not the land on which it is situated) which, if flooded, may result in significant hazards to public health and safety or interrupt essential services and operations for the community at any time before, during and after a flood, as determined by the County Engineer.

**Development (Floodplain Development)**

For purposes of floodplain regulation, development includes any manmade change to improved and unimproved real estate, including, but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating, or drilling operations. "Development" is referred to as "floodplain development" throughout Article 12.0.

**Digital Flood Insurance Rate Map (DFIRM)**

FEMA's digital floodplain map. These digital maps serve as regulatory floodplain maps for issuance of federally subsidized insurance and floodplain management purposes.

**Enclosures**

Fully enclosed areas below the lowest floor of a building.

**Federal Register**

The official daily publication for rules, proposed rules, and notices of federal agencies and organizations, as well as executive orders and other presidential documents.

**FEMA**

Federal Emergency Management Agency, the agency responsible for administering the National Flood Insurance Program (NFIP)

**FEMA Elevation Certificate**

FEMA's official record used to demonstrate compliance with elevation requirements for all new structures and substantial improvements in FEMA Special Flood Hazard Areas (SFHAs) and within the Floodplain Overlay (FPO) District.

**FEMA Overview and Concurrence Form**

FEMA's form provided for community acknowledgement of a map amendment within an MT-1 or MT-2 Form.

**Fill Material or Fill**

For purposes of floodplain regulation, fill material is a deposit of materials placed by artificial means.

**Flood or Flooding**

A general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of water from channels and reservoir spillways, the unusual and rapid accumulation or runoff of surface waters from any source, or mudslides or mudflows that occur from excess surface water that is combined with mud or other debris that is sufficiently fluid so as to flow over the surface of normally dry land areas (such as earth carried by a current of water and deposited along the path of the current).

**Flood Fringe**

The portions of the Floodplain Overlay District that are within flood zones associated with a 1% annual chance of occurrence but not located in a floodway zone.

**Flood Insurance Rate Map (FIRM)**

An official map of a community, on which the Federal Emergency Management Agency has delineated both the Special Flood Hazard Areas (SFHA) and the risk premium zones applicable to the community.

**Flood Insurance Study (FIS)**

The official report provided by the Federal Emergency Management Agency which contains the flood insurance rate map as well as flood profiles for studied flooding sources that can be used to determine base flood elevations for some areas.

**Floodplain or Flood-Prone Area**

Any land area susceptible to being inundated as the result of a flood, including the area of land over which floodwater would flow from the spillway of a reservoir.

**Floodplain Development Permit (FDP)**

A permit required before the start of construction or development within the Floodplain Overlay District (FPO District).

**Floodplain Management**

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 and floodplain management regulations.

**Floodproofing**

Any combination of structural and/or nonstructural additions, modifications, or adjustments to structures, which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents.

**Floodway**

Those portions of the FPO District that must be reserved in order to discharge the 1% Annual Chance Flood Event (1% ACE) without cumulatively increasing the water surface elevation more than 0.5 feet (or other height specified by Larimer County or local community), including the channel of a river or other watercourse and any adjacent floodplain areas that must be kept free of development and other encroachments.

**Freeboard**

The vertical distance in feet above a predicted water surface elevation intended to provide a margin of safety to compensate for unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood such as debris blockage of bridge openings and the increased runoff due to urbanization of the watershed.

**Functionally Dependent Use**

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.

**Habitable Space**

Area(s) within a building or structure used for continual human occupancy including, but not limited to, spaces for living, sleeping, dining, and cooking.

**Historic Structure**

Any structure that is listed individually in the National Register of Historic Places or preliminarily determined as meeting the requirements for individual listing on the National Register, certified or preliminarily determined as contributing to the historical significance of a registered historic district, individually listed on a state inventory of historic places, or individually listed on a local inventory of historic places.

**Letter of Final Determination**

A letter FEMA sends to the Chief Executive Officer of a community stating that a new or updated FIRM or DFIRM will become effective in 6 months. The letter also notifies each affected flood prone community participating in the NFIP that it must adopt a compliant floodplain management ordinance by the map effective date to remain participants in good standing in the NFIP.

**Letter of Map Amendment (LOMA)**

An amendment to the currently effective FEMA map, issued only by FEMA, which establishes that a property is not located in a Special Flood Hazard Area (SFHA).

**Letter of Map Revision (LOMR)**

An official amendment to the currently effective FEMA map, issued by FEMA, which changes flood zones, delineations, and elevations.

**Letter of Map Revision Based on Fill (LOMR-F)**

A modification of the Special Flood Hazard Area (SFHA) shown on the FEMA Flood Insurance Rate Map (FIRM) based on the placement of fill outside the existing regulatory floodway.

**Lowest Adjacent Grade**

The lowest point of the ground level adjacent to a structure or building.

**Lowest Floor Elevation**

The surface elevation of the bottom floor of a structure, including basements.

**Manufactured Home**

For purposes of floodplain regulation, a manufactured home is a prefabricated, transportable structure which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to utilities. The term manufactured home does not include a recreational vehicle.

**Mechanical Equipment**

Mechanical equipment includes, but is not limited to, electrical, heating, ventilation, plumbing, and air conditioning equipment. Mechanical Equipment does not include necessary connections to public utilities.

**Mechanical Equipment Elevation**

The lowest elevation of all mechanical equipment which service a structure including, but not limited to, electrical, heating, ventilation, plumbing, and air conditioning equipment. Mechanical Equipment does not include necessary connections to public utilities.

**Minimum Floodplain Regulations**

Minimum standards for floodplain regulation in accordance with the Federal Emergency Management Agency (FEMA) and the Colorado Water Conservation Board (CWCB) which qualify unincorporated areas of Larimer County for flood insurance under the National Flood Insurance Program (NFIP). Minimum Floodplain Regulations include the following regulatory documents, along with any revisions thereto:

- 1) 44 Code of Federal Regulations §65.3 (44 CFR §65.3)
- 2) National Flood Insurance Act of 1968 (NFIA)
- 3) Section 2 Colorado Code of Regulations 408-1 (2 CCR 408-1)
- 4) CWCB Rules and Regulations for Regulatory Floodplains in Colorado

**Mixed-Use Structure**

A building or structure which contains multiple uses.

**MT-1 Form**

FEMA's application form used with Letters of Map Amendment (LOMAs), Conditional Letters of Map Amendment (CLOMAs), Letters of Map Amendment Based on Fill (LOMR-Fs), and Conditional Letters of Map Amendment Based on Fill (CLOMR-Fs) designed to assist community officials, individual property owners and others in gathering the information needed to determine whether parcels of land or structures are likely to be flooded during a flood event which has a 1% chance of being equaled or exceeded in any given year.

**MT-2 Form**

FEMA's application form used with Letters of Map Revision (LOMRs) and Conditional Letters of Map Amendment (CLOMRs) designed to assist community officials or individuals in gathering the data that FEMA needs to determine whether the effective National Flood Insurance Program (NFIP) map (i.e., Flood Hazard Boundary Map, Flood Insurance Rate Map, Flood Boundary and Floodway Map or Digital Flood Insurance Rate Map) and Flood Insurance Study report for a community should be revised. These forms also should be used by community officials or individuals for requesting FEMA comments on a proposed project issued in the form of a CLOMR. These forms assure FEMA that all pertinent data relating to the request is included in the submittal.

**Permanent**

Any change or alteration expected to remain for greater than 180 days.

**Professional Engineer (PE)**

An individual who has obtained and holds a current and valid license to practice engineering in the State of Colorado through the Colorado Department of Regulatory Agencies (DORA) State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors.

**Recreational Vehicle**

For purposes of floodplain regulation, a recreational vehicle (RV) is a vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled or permanently towable by a light-duty truck, and designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

**Routine Maintenance of Buildings**

Repairs or work necessary to keep an existing building in a safe and habitable condition and for which the total cost does not exceed \$10,000. Such repairs include reroofing or replacing roof tiles, replacing

siding, painting, wallpapering, tiling, carpeting, replacing, or repairing windowpanes, replacing, or repairing plumbing systems, electrical systems, or heating and air conditioning systems, basement sealing, or repairing wells or septic systems. Routine maintenance does not include repairs associated with flood damage.

**Routine Maintenance of Infrastructure**

Repairs or work or necessary to keep existing infrastructure such as roads, bridges, ditches, headgates, pipelines, or utilities in a safe and usable condition as determined by the County Engineer. Routine maintenance of infrastructure must not result in, or have potential to result in, modifications to the hydraulic characteristics of a floodplain, FPO District, or the Base Flood Elevations (BFEs) as determined by the County Engineer.

**Shallow Flooding Areas**

Shallow flooding areas are areas withing Zone AO or AH floodplains with a 1% or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, the path of flooding is unpredictable, and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

**Start of Construction**

The time at which the first land-disturbing activity associated with a development occurs. This includes, but is not limited to, clearing, grading, filling, or excavation, the installation of project elements such as streets, utilities, and walkways, the erection of temporary forms. For a substantial repair or improvement, the start of construction is defined as 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**

A building which as at least two walls or is roofed and principally above ground, a gas or liquid storage tank, or manufactured home which is principally above ground.

**Variance**

A granting of relief from the strict application of a code requirement. A variance permits floodplain development in a manner otherwise prohibited by this Code.

**Violation**

The failure of a building, structure, or other development to be fully compliant with Larimer County's floodplain regulations as defined in Article 12.0 of the Larimer County Land Use Code. A building, structure, or other development not in compliance with Article 12.0 is presumed to be in violation until such time as the violation is adequately remedied or addressed to the satisfaction of the County Engineer or County Commissioners.

**Water Control Structure**

A physical structure designed and built expressly or partially for the purpose of reducing, redirecting, or guiding flows along a watercourse.

**Water Surface Elevation**

The height, in feet relative to the North American Vertical Datum of 1988, of floods of various magnitudes and frequencies in the floodplains of riverine areas.

**Watercourse**

A natural or artificial land surface depression with or without perceptibly defined beds and banks to which surface runoff gravitates and collectively forms a flow of water continuously or intermittently in a defined direction.