

ARAPAHOE COUNTY PLANNING COMMISSION
PUBLIC HEARING
July 7, 2020
6:30 PM

LDC20-002 – Floodplain Management Regulations

Sue Liu, Engineering Services Division

June 19, 2020

PROPOSAL:

The Arapahoe County Engineering Services Division is in the process of amending the Land Development Code (LDC) to update the Floodplain Management Regulations. The purpose of this Planning Commission public hearing is to review the proposed changes, answer any questions, receive public comments, and make a recommendation to the Board of County Commissioners.

The current Floodplain Management Regulations Section 1-5.3 Natural Hazards & Features Maps Paragraph A and Section 4-3.4.(B) Basis for Establishing the Floodplains and Special Flood Hazard Areas Paragraph 1 within the Land Development Code reference the September 28, 2018 Flood Insurance Study (FIS) and Flood Insurance Rate Maps (FIRM). This proposed amendment is to update these sections of the Land Development Code to reference the latest Flood Insurance Study and Flood Insurance Rate Map, dated September 4, 2020.

The Floodplain Management Regulations are required to be updated and revised by the Federal Emergency Management Agency (FEMA) to meet the minimum National Flood Insurance Program (NFIP) requirements. The proposed amendments will bring the Floodplain Management Regulations into compliance with the minimum NFIP requirements.

RECOMMENDATION:

Staff recommends approval of the Floodplain Management Regulations, based upon the conditions of approval outlined in this staff report.

I. BACKGROUND INFORMATION

The County has been a participating community of the National Flood Insurance Program (NFIP) since August 15, 1977. The NFIP is a Federal program enabling property owners in participating communities to purchase flood insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. This program also allows property owners to be eligible for certain federal disaster assistance and loans.

As a participating community in the NFIP, the County is responsible for making sure the County's Floodplain Management regulations meet or exceed the minimum

requirements of the NFIP. FEMA, by law, cannot offer flood insurance in communities that do not have regulations that meet or exceed the minimum requirements.

The physical map revision (PMR) this time is for an 8-Floodplain Study, including thirteen (13) major drainageways -

- Happy Canyon Creek
- Badger Gulch
- Green Acres Tributary
- Lower Coal Creek (Downstream of Yale)
- Lower Murphy Creek (Downstream of Alameda)
- Senac Creek (Downstream of Aurora Reservoir)
- Toll Gate Creek
- Lower East Toll Gate Creek (Downstream of Hampden)
- West Toll Gate Creek
- Unnamed Creek
- Cherry Creek (Downstream of Cherry Creek Dam)
- Littles Creek
- Marston Lake North Drainageway

The properties in unincorporated Arapahoe County lie within five (5) drainageways including, Cherry Creek, Happy Canyon Creek, Senac Creek, Unnamed Creek, and West Toll Gate Creek.

The map update process began when FEMA presented preliminary revised FIS and FIRM to the County for community review on June 30, 2016. ESD staff and the Southeast Metro Stormwater Authority (SEMSWA) performed a detailed review and provided comments on the revisions to the Arapahoe County flood maps for Unincorporated Arapahoe County.

The preliminary revised FIS and FIRM included modifications to base flood elevations of five drainageways within the 8-Floodplain Study. During this review process, it has come to FEMA's attention that a more accurate hydrologic analysis has been completed for Sand Creek, Coal Creek, and Murphy Creek. The new hydrology has the potential to reduce the flood hazard risk from that shown on the Preliminary FIRM panels 08005C0182L, 08005C0201L, 08005C0204L and 08005C0208L along portions of these flooding sources. Due to these issues, the flood hazard data for Sand Creek, Coal Creek and Murphy Creek presented on these Preliminary FIRM panels is not accurate, and is no longer included in the FIRM and FIS updates. These Preliminary FIRM panels are disregarded. Preliminary FIRM panels 08005C0181L, 08005C0203L and 08005C0216M have been included in this revised preliminary edition. These panels have had the flood hazard data removed for Sand Creek, Coal Creek and Murphy Creek as presented on the Preliminary FIRM panels, but do still include preliminary information for East Tollgate Creek and Senac Creek.

The process required FEMA to provide public notice and a 90-day appeal period to property owners affected by the new mapping. This public notice was provided in *the Villager*. FEMA published a notice of the flood hazard determinations in the *Federal*

Register and a public notice on the appeal process. SEMSWA, on behalf of the County, sent letters to notify affected property owners of the 90-day appeal period. The 90-day appeal period was initiated on June 29, 2017.

FEMA did not receive any appeals of the proposed base flood elevations during that time. The revised FIS and FIRM were completed and finalized. On March 4, 2020, FEMA issued the Letter of Final Determination providing notice of final flood elevations to the County, and initiating the six-month compliance period. The County is required to update the regulations during the compliance period. The new study and maps will become effective on September 4, 2020.

II. DISCUSSION

Each time that FEMA provides a community with new or additional flood hazard data, the community is required to adopt new floodplain management regulations or amend the existing regulations to incorporate the new data and meet any additional requirements. The Colorado Water Conservation Board (CWCB) acts as a liaison between FEMA and the local communities. The CWCB NFIP Coordinator will verify that each NFIP community updates their regulations prior to the date of the new effective maps.

- **Amended Section 1-5.3 (A):**

This section has been revised to reference the new Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM) and effective date, as required to meet minimum NFIP requirements.

- **Amended Section 4-3.4.(B)(1):**

This section has been revised to reference the new Flood Insurance Study (FIS) and Flood Insurance Rate Map (FIRM) and effective date, as required to meet minimum NFIP requirements.

Staff recommends approval of the Amendments to the Floodplain Management Regulations.

III. REFERRALS:

Due to minor administrative nature of this change, staff did not send this LDC amendment out to the typical referral groups. The revisions are being coordinated with SEMSWA, CWB, MHFD and FEMA. Their responses are as follows:

Arapahoe County Attorney

Engineering Services staff has worked with the County Attorney's office and has incorporated comments and concerns.

CWCB/FEMA

A copy of the final adopted version of the Floodplain Management

Regulations will be submitted to the CWCB and FEMA upon BOCC approval.

All property owners affected by these map changes received mail notice. The updated maps resulted in **no additional** structures mapped within the five (5) major drainageways.

IV. STAFF FINDINGS:

Staff has reviewed the proposal and supporting documentation as well as referral comments as detailed in this report. Based upon review of applicable goals and policies of the County's Floodplain Management Program, staff finds the following:

1. The proposed revisions to the Floodplain Management Regulations is in compliance with the minimum National Flood Insurance Program (NFIP) requirements, and are consistent with the Floodplain Chapter of the Arapahoe County Stormwater Management Manual.
2. Arapahoe County has the authority to amend provisions of the Land Development Code Regulations as proposed by this revision.
3. The Floodplain Management Regulations, Land Development Code Amendment project is in compliance with the applicable Amendment policies and procedures as set forth in the Land Development Code including public notification requirements.
4. The amended Floodplain Management Regulations will be effective and integrated into the existing LDC on September 4, 2020.
5. Adoption of the proposed Floodplain Management Regulations will enable the County to continue to participate in the NFIP.

V. RECOMMENDATION:

Based on the five findings described herein, staff recommends approval of this Amendment with the following condition of approval:

1. All minor modifications to the text are required prior to incorporation into the existing Land Development Code.
2. The amended Floodplain Management Regulations will be effective and integrated into the existing LDC on September 4, 2020.

VI. DRAFT MOTION:

1. In the case of LDC20-002 – Floodplain Management Regulations, Land Development Code Amendment, we find ourselves in agreement with staff findings one (1) through five (5) including all plans and attachments as set forth in the staff report dated June 19, 2020 and recommend approval to the Board of County Commissioners.
 - 1) All minor modifications to the text are required prior to incorporation into the existing Land Development Code.
 - 2) The amended Floodplain Management Regulations will be effective and integrated into the existing LDC on September 4, 2020.
2. I move an alternate motion.

Attachments: Revised Floodplain Management Regulations

reference and referred to as the “zoning map” in this Code. The zoning map shall be kept on file in the office of the Department of Public Works and Development and is available for public inspection during normal business hours. The map shall be the final authority as to the current zoning status of lands, water areas, buildings, and other structures in the jurisdiction; rules of interpretation are provided in Section 1-5.5.

1-5.3. Natural Hazards and Features Maps

- A. The Arapahoe County, Colorado, and Incorporated Areas Flood Insurance Study and Flood Insurance Rate Maps as prepared by the Federal Emergency Management Agency with an effective date of ~~September 28, 2018~~; **September 4, 2020**
- B. U.S.G.S. maps;
- C. U.S. Army Corps of Engineers Wetlands Delineation Manual;
- D. Sand, Gravel and Aggregate Map;
- E. Lignite Coal Deposit Map.

1-5.4. Other Plans, Manuals, Standards, Reports and Maps

The most recently adopted version of the following manuals, standards, reports, and maps contain the minimum design and technical standards required for construction of infrastructure and roadways within the unincorporated areas of Arapahoe County:

- A. Arapahoe County Stormwater Manual;
- B. Arapahoe County Grading, Erosion and Sediment Control Manual;
- C. Arapahoe County Infrastructure Design and Construction Standards;
- D. Arapahoe County Transportation Plan and Technical Report;
- E. Arapahoe County Guidelines for Traffic Impact Studies;
- F. Arapahoe County Street Naming Policy;
- G. Arapahoe County Streetscape Guidelines;
- H. Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual (Volumes I, II, and III);
- I. Arapahoe County Administrative Manual;
- J. Federal Highway Administration Manual on Uniform Traffic Control Devices; and
- K. Rural Engineering Standards.

1-5.5. Development Application Manual

The Development Application Manual has been adopted by the Board of County Commissioners as a supplemental manual to this Land Development Code. It contains the required plans, exhibits, reports, and documents to be submitted for the various land development applications described in Chapter 5 of this Code, as well as standards for plans to be submitted. The Development Application Manual is incorporated into and made a part of this Land Development Code and may be amended and revised from time to time by the Board of County Commissioners, following recommendation of the PWD Director or Planning Commission.

1-5.6. Interpretation of Zone District Boundaries

In the case of any dispute regarding the zoning classification of property subject to this Code, the official zoning map contained in the Department of Public Works and Development (PWD) shall control. Where

declared to be a part of this Code. The Stormwater Management Manual provides detailed requirements for the management and regulation of floodplains and special flood hazard areas.

4-3.3. Methods of Reducing Flood Losses

To accomplish its purposes, the Floodplain Management Regulations, in conjunction with the Stormwater Management Manual, include methods and provisions for:

- A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to flood water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C. Controlling the alteration of natural floodplains, drainageways, and natural protective barriers, which help accommodate or channel flood waters;
- D. Controlling filling, grading, dredging, and other development which may increase flood damage;
- E. Preventing or regulating the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas; and,
- F. Preventing all new construction or installation of residential or non- residential structures, in any floodplain or special flood hazard area, including FLP-O properties.
- G. Restricting encroachments including fill, new construction, and other development in any floodplain or special flood hazard area unless a technical evaluation demonstrates that the encroachments will not result in an increase (no rise) in flood levels during the occurrence of the base flood, or a FEMA- approved CLOMR or County-approved Floodplain Modification Study is provided.
- H. Requiring a minimum clearance, or freeboard of two feet, be provided between the 100 - year base flood elevation and the structure's lowest floor and other applicable facilities which may be impacted by or adjacent to the base flood. Freeboard is required to allow for uncertainty in the floodplain modeling, changes to the drainageway (i.e. increased invert due to sedimentation), and to provide an additional factor of safety for structures and facilities which would result in damages or hazards during inundation.
- I. Considering cases where protection should be given from flooding events that are produced by storm events in excess of the 100-year storm event, including access routes that are critical for the protection of the public health, safety, and welfare, or where flooding in excess of the 100 -year storm event could result in loss of life, significant damage to utilities and infrastructure, or result in hazardous materials being transported in flood waters. In general, placement of critical facilities within the 500-year floodplain is discouraged.

4-3.4. General Provisions

A. LANDS TO WHICH THESE REGULATIONS APPLY

These regulations shall apply uniformly to all floodplains and special flood hazard areas within the jurisdiction of unincorporated Arapahoe County.

B. BASIS FOR ESTABLISHING THE FLOODPLAINS AND SPECIAL FLOOD HAZARD AREAS

The basis for establishing floodplains and special flood hazard areas shall be the boundary of the 100 -year floodplain. The extent of this area shall be based upon the best available information including:

September 4, 2020

1. The Arapahoe County, Colorado, and Incorporated Areas, Flood Insurance Study (FIS) dated ~~September 29, 2018~~, with the accompanying Flood Insurance Rate Maps (FIRM), produced by the Federal Emergency Management Agency (FEMA) and any revisions thereto, hereby adopted by reference and declared to be part of this Code.
2. The Flood Hazard Area Delineation (FHAD) studies, produced by the Urban Drainage and Flood Control District, as may be amended and updated from time to time, hereby adopted by reference and declared to be a part of this Code.
3. Other 100-year floodplain studies as approved by the County and accepted by the appropriate local, regional, state or federal agencies.
4. As further defined by the requirements of the Floodplain Chapter of the Arapahoe County Stormwater Management Manual.

C. COMPLIANCE

No structure or land shall hereafter be constructed, located, extended, converted or materially altered without full compliance with the terms of these regulations and other applicable regulations. Nothing herein shall prevent the Floodplain Administrator, acting on behalf of the Board of County Commissioners, from taking such lawful action as is necessary to prevent or remedy any violation. These regulations meet the minimum requirements as set forth by the State of Colorado through the Colorado Water Conservation Board and the National Flood Insurance Program.

D. ABROGATION AND GREATER RESTRICTIONS

These regulations are not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where these regulations and another ordinance, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

E. INTERPRETATION

In the interpretation and application of these regulations, all provisions shall be:

1. Considered as minimum requirements;
2. Liberally construed in favor of the governing body; and,
3. Deemed neither to limit nor repeal any other powers granted under State Statutes.

F. WARNING AND DISCLAIMER OF LIABILITY

The degree of flood protection required by these regulations is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasion. Flood heights may be increased by man-made or natural causes. These regulations do not imply that land outside floodplains or special flood hazard areas or uses permitted within such areas will be free from flooding or flood damages. No part of these regulations shall create liability on the part of Arapahoe County, any officer or employee thereof, or the Federal Emergency Management Agency for any flood damages that result from reliance on these regulations or any administrative decision lawfully made thereunder.

4-3.5. Provisions for Flood Hazard Reduction

A. SPECIFIC STANDARDS

In all floodplains and special flood hazard areas as established in Section 4-3.4.B of these regulations, including shallow flooding areas (AO and AH Zones), the following provisions are required: