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  - a. *Guidance for Flood Risk Analysis and Mapping: Ice Jam Analyses and Mapping*;
  - b. *Guidance for Flood Risk Analysis and Mapping: Levees*; and
  - c. *Guidance for Flood Risk Analysis and Mapping: Dams/Reservoirs and Non-Dam Features*.
- (2) FEMA National Flood Insurance Program, 44 C.F.R. §§ 59, 60, 65, 70, and 72, May 13, 2021, available at <https://www.ecfr.gov/cgi-bin/text-idx?SID=504ee2bfc731d90f6be69c8f09fd0b3c&mc=true&tpl=/ecfrbrowse/Title44/44CIsuBchapB.tpl>.
- (3) The United States Environmental Protection Agency Superfund, Emergency Planning, and Community Right-to-Know Programs, Designation, Reportable Quantities, and Notification Regulations, 40 C.F.R. § 302, May 13, 2021, available at <https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.30.302&rgn=div5>.
- (4) The Occupational Safety and Health Administration Occupational Safety and Health Standards Regulations, 29 C.F.R. § 1910, May 13, 2021, available at <https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=13981877314c1c75ef4ee8c5652c8449&ty=HTML&h=L&mc=true&n=pt29.5.1910&r=PART>.
- (5) The Colorado Office of the State Engineer Rules and Regulations for Dam Safety and Dam Construction Materials, 2 CCR 402-1, January 1, 2020, available at [https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8426&fileName=2%20CCR%20402-1.FEMA Regulations 44 C.F.R. § § 59, 60, 65, and 70\(2010\)](https://www.sos.state.co.us/CCR/GenerateRulePdf.do?ruleVersionId=8426&fileName=2%20CCR%20402-1.FEMA%20Regulations%2044%20C.F.R.%20%26%2065%20and%2070(2010)), available at [http://www.access.gpo.gov/nara/cfr/waisidx\\_00/44cfrv1\\_00.html](http://www.access.gpo.gov/nara/cfr/waisidx_00/44cfrv1_00.html), EPA Regulations 40 CFR § 302 (2010), available at [http://www.access.gpo.gov/nara/cfr/waisidx\\_03/40cfr302\\_03.html](http://www.access.gpo.gov/nara/cfr/waisidx_03/40cfr302_03.html), and OSHA Regulations 29 CFR § 1910 (2010), available at [http://www.access.gpo.gov/nara/cfr/waisidx\\_99/29cfr1910\\_99.html](http://www.access.gpo.gov/nara/cfr/waisidx_99/29cfr1910_99.html), are incorporated herein by reference. In addition, The Colorado “Office of the State Engineer Rules and Regulations for Dam Safety and Dam Construction Materials,” set forth in 2 C.C.R. § 402-1 (2010), available at [http://water.state.co.us/pubs/rule\\_reg/ds\\_rules07.pdf](http://water.state.co.us/pubs/rule_reg/ds_rules07.pdf), are incorporated herein by reference. The FEMA Guidelines and Specifications for Flood Mapping Partners (2009), available at [www.fema.gov/fhm/dl\\_cgs.shtm](http://www.fema.gov/fhm/dl_cgs.shtm), are also incorporated herein by reference.
- (6) FEMA Policy No. 104-008-03: Floodplain Management Requirements for Agricultural Structures and Accessory Structures, February 2020, available at [https://www.fema.gov/sites/default/files/2020-08/fema\\_floodplain-management\\_agriculture-accessory-structures\\_2020.pdf](https://www.fema.gov/sites/default/files/2020-08/fema_floodplain-management_agriculture-accessory-structures_2020.pdf).



B. These rules, regulations, standards, and guidelines in subparagraphs (1)-(6) of Rule 17.A. are hereby incorporated by reference by the Colorado Water Conservation Board and made a part of these Rules and Regulations for Regulatory Floodplains in Colorado. Materials in these Rules, including, but not limited to those mentioned here in Rule 17, which are incorporated by reference are limited to those materials in existence as of the effective date of these revised Rules and do not include later amendments to or editions of these such materials rules, regulations, standards, and guidelines. The material incorporated by reference is available for public inspection during regular business hours at the office of the Colorado Water Conservation Board, 1313 Sherman Street, Room 724718, Denver, CO 80203 or may be examined at any state or federal publications depository library, or on the FEMA or CWCB website.

#### **Rule 18. Severability:**

If any portion of these Rules is found to be invalid, the remaining portion of the Rules shall remain in force and in effect.

#### **Rule 19. Recommended Activities for Regulatory Floodplains:**

The following list contains Ffloodplain mManagement activities and actions suggested by the CWCB to increase a cCommunity's overall level of Fflood protection. Communities and other authorized government entities may:

- A. Adopt local standards above and beyond the FEMA and CWCB minimum requirements.
- B. Develop a Flood Response Plan that identifies responsibilities/actions before, during, and after a Fflood event.
- C. Enroll in FEMA's National Flood Insurance Program (NFIP) and possibly FEMA's Community Rating System (CRS)-Program.
- D. Develop an early warning fFlood detection system (Fflood warning system) using available technologies such as automated precipitation and stream flow gages linked to an appropriate notification system.
- E. Coordinate with lenders, insurance agents, real estate agents, and developers to prepare and discuss educational tools based on state and federal requirements.
- F. Promote wise fFloodplain Development and support effective structural and non-structural fFlood mMitigation projects.
- G. Conduct fFloodplain sStudies in areas of fForeseeable dDevelopment that do not currently have detailed Ffloodplain Sstudies.
- H. Maintain an electronic or paper library of local flood related data.
- I. Develop a Fflood risk outreach program and notify fFlood prone residents annually of fFlood hazards and the need for fFlood insurance.

- J. Encourage elevation of Flood-prone structures and Flood-proofing of structures in the Floodplains.
- K. Utilize available state/federal Mitigation and preparedness funds.
- L. Require certified Floodplain managers to review proposed land developments.
- M. Advise the public at large that Flooding does occur above and beyond the 100-Year-Flood and 500-Year-Floods. Floods greater than 500-Year-Floods (0.2-percent-annual-chance Floods) do occur, and loss of life and property is possible in areas mapped outside of both the 100-Year-Floodplain and 500-Year-Floodplains.
- N. Utilize the concept of “No Adverse Impact” Floodplain Management where the action of one property owner does not adversely impact the rights of other property owners, as measured by increased Flood peaks, Flood stage, Flood velocity, and erosion and sedimentation. “No Adverse Impact” could be extended to entire watersheds as a means to promote the use of retention/detention or other techniques to mitigate increased runoff from urban areas.
- O. Prohibit the construction of new Levees that are intended to remove land from a Regulatory Floodplain for the purpose of allowing new Development activity to take place in areas that are otherwise Flood prone.
- P. Require an appropriate level of Freeboard at bridges between the 100-Year-Flood water surface elevation and the lowest elevation of the lowest structural member to allow for passage of waterborne debris.
- Q. Identify areas prone to Flooding outside of the 500-Year-Floodplain where loss of life or Substantial property-Damage may occur. Flooding greater than 500-Year-Flood (0.2% chance) events can and do occur as well, and loss of life and property is possible in areas mapped outside of both the 100-Year-Floodplain and 500-Year-Floodplain-regulatory Floodplains. Communities are encouraged to map and regulate 500-Year-Floodplains for Critical Facilities at their sole discretion.
- R. Maintain a Flood hazard page on the Community website with links to the CWCB, FEMA Flood Map Store/Service Center, National Flood Insurance Program/NFIP, National Weather Service, local building codes, and local permitting information.
- S. The CWCB discourages Compensatory Flood Storage because existing Flood storage volume should be preserved. However, when necessary, structures and fill that displace Floodplain storage volume shall be compensated for by excavation of equivalent volumes at equivalent elevations within a nearby vicinity of the displaced volume. The compensatory storage area shall be hydraulically connected to the source of Flooding.
- T. Adopt Buffer Ordinances that limit Development in and near natural protective features such as riparian stream corridors and wetlands. Natural protective features may extend beyond 100-Year-Flood elevations. Extra protections for these areas are beneficial because these areas attenuate runoff periods, improve water quality, stabilize streambanks, recharge groundwater aquifers, allow for lateral stream migration, and protect aquatic and terrestrial habitat. Riparian and wetland areas also enhance the general aesthetic value of a community.

- U. Buffer ordinances are often seen as part of land use or zoning code. They may also stand alone in other portions of the municipal code. Options for widths include fixed width, variable width, or multi-zoned buffers.
- V. **Establish Residual Risk Mapping.** Residual Risk is the threat to the areas behind levees that may still be at risk for Flooding. FEMA has identified thousands of miles of levees nationwide, affecting millions of people. It is important for levee owners, communities, and homeowners to understand the risks associated with living in levee-impacted areas and the steps that can be taken to provide full protection from Flooding. Even the best Flood protection system or structure cannot completely eliminate the risk of every Flood event, and when levee systems fail, the results may be catastrophic and the damage may be more significant than if the levee system had not been built.
- W. A Community may regulate any 100-Year shallow Flooding areas, defined as Flooding with an average depth limited to 3.0 feet or less where no defined Channel exists.
- X. Detention/Flood control storage and LID should be considered, when practicable, as part of a basinwide program for the watershed.

**Rule 20. Effective Date:**

These revised Rules shall apply to the designation and approval of all floodplain-Flood Hazard information made by the Board-CWCB and all other Floodplain activities on or after January 14, 2011-2022 and are, therefore, not retroactive to any Floodplain information Designated and Approved by the Board or other Floodplain activities prior to the effective date. ~~These Rules contain provisions that will require many local ordinances to be updated to be consistent with these Rrules. A transition period of three years beginning from the effective date of these rules will be in effect during which all local governments may follow current local ordinances but must undertake activities to come into compliance with these Rules. Following this transition period, all floodplain activities shall be in conformance with these Rules. In addition, communities may, at their sole discretion, allow un-built projects that were previously permitted by the local government, prior to the adoption date of the local ordinance for which these Rules are incorporated, to be built and therefore considered to be in compliance with these Rules. Communities may also, at their sole discretion, permit and allow projects for which a valid CLOMR was issued prior to the adoption date of the local ordinance for which these Rules are incorporated.~~