

## **SECTION 10 – FLOODPLAIN REGULATIONS**

### **10.1 GENERAL PROVISIONS**

#### **10.1.1 Applicability**

**10.1.1.1** The flood hazard areas of Archuleta County, Colorado are subject to periodic inundation which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

**10.1.1.2** These flood losses are caused by the cumulative effect of obstructions in areas of special flood hazards, which increase flood heights and velocities, and when inadequately anchored, damage uses in other areas. Uses that are inadequately flood proofed elevated, or otherwise protected from flood damage also contribute to the flood loss.

#### **10.1.2 Authority**

These Regulations are adopted pursuant to Title 29, Article 20, Section 101, et seq., and Title 30, Article 15, part 4 of the 1973 Colorado Revised Statutes.

#### **10.1.3 Purpose**

The intent and purpose of these Regulations is to promote the public health, safety and general welfare and to minimize losses due to flood conditions in specific areas by provisions designed to:

**10.1.3.1** Prohibit within a floodplain any obstruction which would cause a foreseeable damage to others, wherever located;

**10.1.3.2** Minimize or eliminate infiltration of, or discharge to, floodwaters with respect to new or replacement water supply and waste disposal systems;

**10.1.3.3** Prohibit within a floodplain substantial solid debris capable of being carried downstream by floodwaters;

**10.1.3.4** Protect the public from the burden of avoidable financial expenditures for flood control projects, flood relief measures, and damages to public utilities, streets and bridges;

**10.1.3.5** Prevent avoidable business and commerce interruptions;

- 10.1.3.6** Ensure that potential buyers are on notice that property is subject to flood hazard and the mitigation requirements which must be met for use of such property;
- 10.1.3.7** Facilitate the administration of flood hazard areas by establishing requirements which must be met before construction in such areas is permitted;
- 10.1.3.8** Facilitate the County’s participation in the Federal Flood Insurance Program;
- 10.1.3.9** Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future flood blight areas;
- 10.1.3.10** To ensure that those who occupy the areas of special flood hazards assume responsibility for their actions;
- 10.1.3.11** Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public; and,
- 10.1.3.12** Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone, and sewer lines, streets and bridges located in areas of special flood hazard.

**10.1.4 Methods**

In order to accomplish its purposes, these Regulations include methods and provisions for:

- 10.1.4.1** Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;
- 10.1.4.2** Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- 10.1.4.3** Controlling the alteration of natural flood plains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- 10.1.4.4** Controlling filling, grading, dredging, and other development which may increase flood damage; and,

**10.1.4.5** Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

**10.1.5 Lands to Which These Regulations Apply:**

These Regulations shall apply to all areas of special flood hazard in the unincorporated portions of Archuleta County, as shown on the Flood Insurance Rate Maps (FIRM) and the Flood Insurance Studies adopted pursuant to these Regulations. These regulations shall also apply to lands adjoining watercourses within the County, for which no FEMA FIS or FIRM panels have been developed, but which do pass floodwaters in excess of a calculated one hundred (100) year peak flow rate of fifty (50) cfs. Inclusion of these other areas into the requirements of this Section shall be determined by the County Engineer, pursuant to engineering calculations submitted by the applicant's engineer.

**10.1.6 Adoption of Maps and Studies:**

**10.1.6.1** Designation of Flood Insurance Rate Maps and Flood Insurance Studies to be used in application of these Regulations shall be by official resolutions of the Board of County Commissioners after a public hearing. Notice of such hearing shall be published once, in a newspaper of general circulation in the County at least ten (10) days, but not more than thirty (30) days, prior to the hearing. The published notice shall include the time and place of the hearing, and shall designate the County office where information shall be available for public inspection. Within thirty (30) days of the conclusion of the hearing, the Commissioners will make a decision as to the floodplain designation.

**10.1.6.2** Prior to the designation of official studies and maps by the Board of County Commissioners, the Planning Commission and the Colorado Water Conservation Board shall review the proposed studies. Recommendations shall be presented to the Board of County Commissioners by the above named agencies for the adoption, rejection or adoption with modification of the studies and/or maps.

**10.1.7 Basis for Establishing the Areas of Special Flood Hazard:**

The areas of special flood hazard identified by the Federal Emergency Management Agency (FEMA) is a scientific and engineering report entitled "The Flood Insurance Study for Archuleta County, Colorado", dated July, 1978, as amended, with an accompanying Flood Insurance Rate Map is hereby adopted by reference and declared to be a part of these Regulations. The Flood Insurance Study is on file at the Planning Department.

*New map effective date 9/25/09 and new flood insurance study effective date 9/25/09*

**10.1.8 Amendments:**

Any changes or amendments to these Regulations shall be adopted pursuant to the procedure set forth in § 30-15-401 et seq., C.R.S. 1973, as the same may from time to time be amended.

**10.1.9 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 occasions. Flood heights may be increased by man-made or natural causes. These Regulations do not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. These Regulations shall not create liability on the part of Archuleta County, Colorado, any officer or employee thereof, or FEMA, for any flood damages that result from reliance on these Regulations or any administrative decision made thereunder.

**10.1.10 Interpretation**

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

**10.1.10.1** Considered as minimum requirements;

**10.1.10.2** Deemed neither to limit nor repeal any other powers granted under State statutes;

**10.1.10.3** Liberally construed in favor of the governing body.

**10.1.11 Validity of Prior Regulations**

Nothing herein shall be deemed to affect the validity of prior regulations and all actions taken thereunder.

**10.1.12 Compliance**

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of these Regulations and other applicable regulations.

**10.1.13 Abrogation and Greater Restrictions**

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

## **10.2 ADMINISTRATION**

### **10.2.1 Designation of the County Planning and Building Departments:**

The Planning Department is hereby appointed to administer and implement these Regulations by granting or denying development permit applications in accordance with its provisions.

#### **10.2.1.1 Interpret Floodplain Boundaries:**

- 10.2.1.1.1** Where interpretation is needed as to the accurate location of the boundaries of floodplains and floodways, Planning Department personnel shall make the necessary interpretations.
- 10.2.1.1.2** If available, the base flood elevations as shown on the profiles and tabulations for the point or points in question shall be the governing factor in determining accurate boundaries and shall take precedence over the boundaries shown on the maps.
- 10.2.1.1.3** When base flood elevation data has not been provided in accordance with Section 10.2.1.1.2 above, the Planning Department shall obtain, review, and reasonably utilize any base flood elevations and flood way data available from a Federal, State, or other source, as criteria for requiring that new construction, substantial improvements or other development in Zone A, in order to administer these Regulations.
- 10.2.1.1.4** Any person contesting the location of a floodplain boundary shall be given a reasonable opportunity to appeal the floodplain designation. Any boundary appeal must be substantiated by technical engineering data of sufficient detail to allow a determination to be made.
- 10.2.1.1.5** Review all development permits to determine that the permit requirements of these Regulations have been satisfied.
- 10.2.1.1.6** Review all development permits to determine that all necessary permits have been obtained from Federal, State, or local governmental agencies from which prior approval is required.
- 10.2.1.1.7** Review all development permits to determine if the proposed development is located in the floodway. If located in the floodway, assure that the encroachment provisions are met.

**10.2.1.2 Information to be Obtained and Maintained:**

- 10.2.1.2.1** Maintain for public inspection all records pertaining to the provisions of these Regulations.
- 10.2.1.2.2** Obtain and record the actual elevation (in relation to National Geodetic Vertical Datum) of the lowest floor (including basement) of all new or substantially improved structures, and whether or not the structure contains a basement.
- 10.2.1.2.3** For all new or substantially improved flood proofed structures:
  - 10.2.1.2.3.1** Verify and record the actual elevation (in relation to National Geodetic Vertical Datum to which the structure has been flood proofed), and
  - 10.2.1.2.3.2** Maintain the flood proofing certifications required herein.

**10.2.1.3 Notification:**

Notify adjacent communities and the Colorado Water Conservation Board prior to any alteration or relocation of a watercourse, and submit evidence of such notification to FEMA.

- 10.2.1.4** Require that maintenance be provided within the altered or relocated portion of said watercourse so that the flood-carrying capacity is not diminished.

**10.2.2 Application Requirements:****10.2.2.1 Information Submittals:**

In addition to the regular development review requirements, a Development Permit shall be obtained before construction or development begins within any area of special flood hazard, as established in these Regulations. Application for a Development Permit shall be made on forms furnished by the Planning Department and may include, but not be limited to: plans in duplicate drawn to scale showing the nature, location, dimensions, and elevations of the area in question; existing or proposed structures, fill, storage of materials, drainage facilities; and the location of the foregoing. Specifically, the following information is required:

- 10.2.2.1.1** Location of site (distance upstream as per floodplain studies).
- 10.2.2.1.2** Building site elevation (in relation to National Geodetic Vertical Datum).

- 10.2.2.1.3** Difference between building site elevation and streambed elevation.
- 10.2.2.1.4** Elevation in relation to National Geodetic Vertical Datum, of the lowest floor (including basement) of all structures.
- 10.2.2.1.5** Elevation in relation to National Geodetic Vertical Datum to which any structure has been flood proofed.
- 10.2.2.1.6** Description of any construction activity, which would affect the hydraulic capacity of the base, flood perimeters.
- 10.2.2.1.7** Certification by a registered professional engineer or architect that the flood proofing methods for any non-residential structure meet with flood proofing criteria, as described in Specific Standards, and,
- 10.2.2.1.8** Other information requested by the Planning Department.
- 10.2.2.1.9** Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

**10.2.2.2 Preparation of Submittals:**

The above information shall be prepared and certified by a Professional Engineer, registered in the State of Colorado. A registered Land Surveyor may provide required elevation data.

**10.2.2.3 Information to be Kept on File:**

Whenever an applicant is required to prepare and submit base flood elevation data in areas designated on the FIRM on an approximate A-zone, the applicant shall also submit all underlying data and engineering calculations. Such information shall be kept on file for use pursuant to Section 10.10.1.

**10.2.3 Variance Procedure:**

**10.2.3.1 Appeal Board:**

**10.2.3.1.1** The Board of Appeals shall hear and decide appeals and requests for variances from the requirements of these Regulations.

**10.2.3.1.2** The Board of Appeals shall hear and decide appeals when it is alleged there is an error in any requirement, decision, or determination made in the enforcement or administration of these Regulations.

- 10.2.3.1.3** Those aggrieved by the decision of the Board of Appeals may seek judicial review of such decision pursuant to C.R.C.P. 106(a)(4).
- 10.2.3.1.4** In passing upon such applications, the Board of Appeals shall consider all technical evaluations, all relevant factors, and standards specified in other sections of these Regulations; and,
- 10.2.3.1.4.1** The danger that materials may be swept onto other lands to the injury of others;
  - 10.2.3.1.4.2** The danger to life and property due to flooding or erosion damage;
  - 10.2.3.1.4.3** The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
  - 10.2.3.1.4.4** The importance of the services provided by the proposed facility to the community;
  - 10.2.3.1.4.5** The necessity to the facility of a waterfront location, where applicable;
  - 10.2.3.1.4.6** The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
  - 10.2.3.1.4.7** The compatibility of the proposed use with existing and anticipated development;
  - 10.2.3.1.4.8** The relationship of the proposed use to the Community plan and floodplain management program of that area;
  - 10.2.3.1.4.9** The safety of access to the property in times of flood for ordinary and emergency vehicles;
  - 10.2.3.1.4.10** The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters;
  - 10.2.3.1.4.11** The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and

facilities such as sewer, gas, electrical, and water systems and streets and bridges.

**10.2.3.1.5** Upon consideration of the above factors and the purposes of these Regulations, the Board of Appeals may attach such conditions to the granting of variances, as it deems necessary to further the purposes of these Regulations.

**10.2.3.2 Conditions for Variances:**

**10.2.3.2.1** Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, with regard to the procedures set forth herein.

**10.2.3.2.2** Variances shall not be issued within any designated flood way if any increase in flood levels during the base flood discharge would result.

**10.2.3.2.3** Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relieve.

**10.2.3.2.4** Variances shall only be issued upon:

**10.2.3.2.4.1** A showing of good and sufficient cause;

**10.2.3.2.4.2** A determination that failure to grant the variance would result in exceptional hardship to the applicant; and

**10.2.3.2.4.3** A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of the public or conflict with existing local laws or regulations;

**10.2.3.2.5** Any applicant to whom a variance is granted shall be given written notice that the structure may be permitted to be built with a lowest floor elevation below the base flood elevation and that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced lowest floor elevation.

- 10.2.3.2.6** The Planning Department shall maintain the records of all appeal actions, including technical information, and report any variances to FEMA.

### **10.3 PROVISIONS FOR FLOOD HAZARD REDUCTION**

#### **10.3.1 Compliance:**

- 10.3.1.1** No building permit shall be issued for any building or structure, including a manufactured home or a mobile home, which is proposed to be located within an area of special flood hazard or Floodplain Overlay District without the full compliance with the terms of this Section.

EXCEPTION: The Planning Department may accept certification from a professional engineer or surveyor, registered in the State that a building site in a designated floodplain is above the base flood level.

- 10.3.1.2** No subdivision or other development proposed within any designated floodplain area, including a Floodplain Overlay District, shall be granted final approval without full compliance with the provisions of this Section.

#### **10.3.2 General Standards:**

##### **10.3.2.1 Anchoring:**

- 10.3.2.1.1** All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure and to withstand hydrodynamic loads.

- 10.3.2.1.2** All manufactured and mobile homes must be elevated and anchored to resist flotation, collapse or lateral movement. Methods of anchoring may include, but are not limited to, use of over-the-top and frame ties to ground anchors. This requirement is in addition to applicable State and local anchoring requirements for resisting wind forces. Specific requirements shall be that:

- 10.3.2.1.2.1** Over-the-top ties be provided at each of the four (4) corners of the manufactured or mobile home with two (2) additional ties per side at intermediate locations, with manufactured and mobile homes less than fifty (50) feet long requiring one (1) additional tie per side;

- 10.3.2.1.2.2** Frame ties be provided at each corner of the home with five (5) additional ties per side at

intermediate points, with manufactured and mobile homes less than fifty (50) feet long requiring four (4) additional ties per side;

**10.3.2.1.2.3** All components of the anchoring system shall be capable of carrying a force of forty eight hundred (4,800) pounds; and

**10.3.2.1.2.4** Any additions to the manufactured or mobile home shall be similarly anchored.

**10.3.2.2 Construction Materials and Methods:**

**10.3.2.2.1** All new construction and/or substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.

**10.3.2.2.2** All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.

**10.3.2.2.3** All new construction and substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

**10.3.2.3 Utilities:**

**10.3.2.3.1** All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of floodwaters into the system.

**10.3.2.3.2** New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into systems and discharge from the systems into flood waters.

**10.3.2.3.2.1** New and replacement sanitary sewage systems crossing stream courses with a one hundred (100) year peak flow in excess of fifty (50) cfs, shall be buried beneath the stream bed a minimum of three (3) feet, and the entire pipe crossing shall be encased in concrete with a minimum concrete cover over the pipe of six (6) inches in all directions. For stream channels

which meet or exceed the criteria described above, and which also are located within the WO District, the minimum burial depth shall be increased to four (4) feet, and stabilization of the streams bed and banks may also be required, as determined by the County Engineer.

**10.3.2.3.2.2** No portion of a new or replacement sanitary sewage on-site disposal system shall be located nearer than fifty (50) feet to a stream course with a one hundred (100) year peak flow in excess of fifty (50) cfs. For stream channels which meet or exceed the criteria described above, and which also are located within the WO District, the minimum setback distance shall be increased to seventy five (75) feet.

**10.3.2.3.3** On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

**10.3.2.3.4** Plumbing opening into areas required to be flood proofed shall be equipped with backwater valves as provided in the plumbing code.

**10.3.2.3.5** Electrical wiring shall be entirely within the flood proof space. The electrical service and meter shall be above the base flood level in a location approved by the serving utility.

**10.3.2.4 Subdivision and Other Development Proposals:**

**10.3.2.4.1** All subdivision proposals shall be consistent with the need to minimize flood damage.

**10.3.2.4.2** All subdivision proposals shall have utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.

**10.3.2.4.3** All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.

**10.3.2.4.4** Base flood elevation data shall be provided for all subdivision or other development proposals, which contain at least fifty (50) lots or five (5) acres, whichever is less.

**10.3.2.4.5** No building sites shall be approved in any determined floodway area.

**10.3.2.4.6** Any contemplated floodplain encroachment or channeling shall be thoroughly analyzed and its effect on stream flow determined before it is undertaken. No encroachment of a floodway area shall be allowed which would result in any increase in flood levels during the occurrence of a base flood.

**10.3.2.5 Enclosed Areas:**

**10.3.2.5.1** *For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are used solely for parking of vehicles, building access or storage in an area other than a basement which is subject to flooding shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing the entry and exit of floodwaters in accordance with the specifications in 60.3(c)(5) of the NFIP Regulations.*

*Added 9/25/09*

**10.3.3 Specific Standards:**

In all areas of special flood hazards, the following provisions are required. In determining compliance with this Section, available base flood elevation data shall be utilized.

**10.3.3.1 Residential Construction:**

New construction and substantial improvements of any residential structure shall have the lowest inhabited floor, including basement, elevated to one (1) foot above the base flood elevation. Un-inhabited levels of the building may occupy space below the base flood elevation, provided that the structure allows for the passage of floodwaters in conformance with FEMA guidelines, including foundation vents, structural piers or other FEMA approved methods. Plans for buildings which are intended to pass flood flows beneath or through the structure shall be prepared a Colorado registered professional engineer. No electrical or mechanical equipment may be located below the base flood elevation.

**10.3.3.2 Non-Residential Construction:**

New construction and substantial improvement of any commercial, industrial or other non-residential structure shall either have the lowest floor, including basement, elevated to at least one (1) foot above the level of the base flood elevation; or, together with attendant utility and sanitary facilities, shall:

- 10.3.3.2.1** Be flood proofed so that below the base flood level the structure is watertight with walls substantially impermeable to the passage of water;
- 10.3.3.2.2** Have structural components capable of resisting hydrodynamic loads and effects of buoyancy; and
- 10.3.3.2.3** Be certified by a registered professional engineer or architect that the standards of this subsection are satisfied.

**10.3.3.3 Manufactured and Mobile Homes:**

**10.3.3.3.1** Manufactured and mobile homes shall be anchored in accordance with standards above, (Anchoring and Definitions).

**10.3.3.3.2** All manufactured and mobile homes or those to be substantially improved shall conform to the following requirements:

**10.3.3.3.2.1** Require that manufactured and mobile homes that are placed or substantially improved on a site (i) outside of a manufactured or mobile home park or subdivision, (ii) in a new manufactured or mobile home park or subdivision, (iii) in an expansion to an existing manufactured or mobile home park or subdivision, or (iv) in an existing manufactured or mobile home park or subdivision on which a manufactured or mobile home has incurred “substantial damage” as the result of a flood, be elevated on a permanent foundation such that the lowest floor of the manufactured or mobile home is elevated to one (1) foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse and lateral movement.

**10.3.3.3.2.2** Require that manufactured and mobile homes to be placed or substantially improved on sites in existing manufactured and mobile home parks or subdivisions that are not subject to the provisions in (a) above be elevated so that either (i) the lowest floor of the manufactured or mobile home is one (1) foot above the base flood elevation, or (ii) the manufactured or mobile home chassis is supported by reinforced piers or other or other foundation elements that

are no less than thirty six (36) inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

- 10.3.3.3.2.3** Require that recreational vehicles either (i) be on the site for fewer than one hundred eighty (180) consecutive days, (ii) be fully licensed and ready for highway use, or (iii) meet the permit requirements and elevation and anchoring requirements for resisting wind forces.

**10.3.4 Floodways:**

Located within areas of special flood hazard are areas designated as floodway. Since the floodway is an extremely hazardous area due to the velocity of flood waters which carry debris, potential projectiles and erosion potential, the following provisions apply:

- 10.3.4.1** All encroachments within flood way including fill, new construction, substantial improvements, and other development are prohibited unless a technical evaluation by a registered professional engineer demonstrates that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.

- 10.3.4.2** All new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions of Section 10.3.

- 10.3.4.3** *Until a regulatory floodway is designated, no encroachment may increase the Base Flood level more than 1 foot.*

*Added 9/25/09*

**10.4 ENFORCEMENT**

**10.4.1 Violations – Penalties:**

Violations of any provision of these Regulations shall be punishable as provided in Section 30-15-402, C.R.S. 1973, as the same may from time to time be amended.

**10.4.2 Separate Offenses:**

Where a development as defined herein, is in violation of any provision of these Regulations, each violation of any provision and day that such development is in violation shall be deemed a separate offense.

**10.4.3 Other Remedies:**

The Board of County Commissioners may institute an appropriate action for injunction mandamus, or to prevent, enjoin, abate or remove development not in compliance with these Regulations.