

14.3 FLOODPLAIN MANAGEMENT REGULATIONS

(1) AUTHORITY

The legislature of the State of Colorado, in the Local Land Use Control Enabling Act (C.R.S. § 29-20-101 et. seq) and in County Planning and Building Codes (C.R.S. § 30-28-101 et. seq), has delegated to county governments the responsibility to adopt regulations designed to minimize losses due to flooding. Therefore, the Board of County Commissioners in the County of Grand hereby adopt the following floodplain management regulations.

(2) PURPOSE

This Section establishes regulations to prevent the imprudent use and occupation of flood hazard areas and to minimize the threat of flooding to human life and property. It addresses development within areas subject to flood hazards that are depicted on the most recent Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps, National Flood Insurance Program and areas that are identified by survey, documented site-specific observation, or engineering study as being areas subject to flood hazards, within the 100-year floodplain.

Specifically, this Section establishes development standards that are intended to reduce the hazard of floods to life and property by:

- (a) **PROHIBITING USES HAZARDOUS TO LIFE.** Prohibiting certain uses that are hazardous to life or property in time of flood from locating in the floodplain.
- (b) **RESTRICTING USES HAZARDOUS TO HEALTH.** Restricting the development of certain uses in the floodplain that are hazardous to public health in time of flood.
- (c) **RESTRICTING USES SUSCEPTIBLE TO FLOOD DAMAGE.** Restricting the development of certain uses in the floodplain that are especially susceptible to flood damage, so as to alleviate hardship and eliminate demands for public expenditures for relief and protection.

(3) METHODS

Methods of reducing flood losses include:

- (a) Regulating 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.
- (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, stream channels, and natural protective barriers which are involved in the accommodation of 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.

(4) JURISDICTION

These regulations shall apply to any of the following activities within the unincorporated areas of Grand County, Colorado:

- (a) Any division of lands into a subdivision as defined in Section 1.6 (4) of the Grand County Subdivision Regulations.
- (b) Any re-subdivision or re-platting of a lot, tract, or parcel of land.
- (c) Any new building permit application for a structure.
- (d) To all areas of special flood hazard with the jurisdiction of unincorporated Grand County.

(5) DEFINITIONS

- (a) **100-YEAR FLOOD:** 100-Year Flood means having a recurrence interval that has a one percent chance of being equaled or exceeded during any given year (1- percent-annual-chance-flood). The terms “one-hundred-year-flood” and” one percent chance flood” are synonymous with the term “100-year flood”.
- (b) **100-YEAR FLOODPLAIN:** 100-Year Floodplain means the area of land susceptible to being inundated as a result of the occurrence of a one-hundred-year flood.
- (c) **500-YEAR FLOOD:** 500-Year Flood means a flood having a recurrence interval that has a 0.2-percent chance of being equaled or exceeded during any given year (0.2-percent-chance-annual-flood).
- (d) **500-YEAR FLOODPLAIN:** 500-Year Floodplain means the area of land susceptible to being inundated as a result of the occurrence of a five-hundred-year flood.
- (e) **ADDITION:** Any activity that expands the enclosed footprint or increases the square footage of an existing structure.
- (f) **AGRICULTURE BUILDING:** A structure located on real property classified as agricultural by the Grand County Assessor that is designed, constructed and used to house farm implements, hay, grain, poultry, livestock or other horticultural products. This structure shall not be a place of human habitation or a place of employment where agricultural products are processed, treated or packaged, nor shall it be a place used by the public.
 - (i) Agricultural buildings or structures are considered "walled and roofed" when the structure includes at least two outside rigid walls and a fully secured roof.
 - (ii) Although structures may be related to agricultural purposes or uses, development that does not meet the NFIP definition of a structure for floodplain management purposes, such as, but are not necessarily limited to, a pole barn (roofed but not walled) or a holding pen or aquaculture tank/pool (walled but not roofed) are generally not considered to be agricultural structures by the NFIP.

- (g) **ALLUVIAL FAN FLOODING:** Alluvial Fan Flooding means 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.
- (h) **AREA OF SHALLOW FLOODING:** Area of Shallow Flooding means a designated Zone AO or AH on a community's Flood Insurance Rate Map (FIRM) with a one percent chance or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable and where velocity flow may be evident.
- (i) **BASE FLOOD:** Means the flood having a one percent chance of being equaled or exceeded in any given year.
- (j) **BASE FLOOD ELEVATION (BFE):** Base Flood Elevation (BFE) means the elevation shown of a FEMA FIRM for Zones AE, AH, A1-30, AR, AR/A, AR/AE, AR/A1-30, AR/AH, AR/AO, V1-V30, and VE that indicates the water surface elevation resulting from a 100-year flood.
- (k) **BASEMENT:** Basement means any area of a building having its floor sub-grade on all sides.
- (l) **CHANNEL:** Channel means the physical confine of a stream or waterway consisting of a bed and stream banks, existing in a variety of geometries.
- (m) **CHANNELIZATION:** Channelization means the artificial creation, enlargement or realignment of a stream channel.
- (n) **CODE OF FEDERAL REGULATIONS (CFR):** Code of Federal Regulations (CFR) means the codification of the general and permanent Rules published in the Federal Register by the executive departments and agencies of the Federal Government.
- (o) **COMMUNITY:** Community means any political subdivision in the state of Colorado that has authority to adopt and enforce floodplain management regulations through zoning.
- (p) **CONDITIONAL LETTER OF MAP REGULATIONS (CLOMR):** FEMA's comment on a proposed project that would, upon construction, affect the hydrologic or hydraulic characteristics of a flooding source and thus result in the modification of the existing regulatory floodway, the effective Base Flood Elevations (BFEs), or the Special Flood Hazard Area (SFHA). The letter does not revise an effective NFIP map, it indicates whether the project, if built as proposed, would be recognized by FEMA. FEMA charges a fee for processing a CLOMR to recover the costs associated with the review. Building permits cannot be issued based on a CLOMR, because a CLOMR does not change the NFIP map.
- (q) **NEW CONSTRUCTION:** New Construction means structures for which the start of construction commenced on or after the effective date of these regulations.

- (r) **CONSTRUCTION, START OF:** Start of means the date the building permit was issued, provided the actual start of construction, including substantial improvements, was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site. Permanent construction does not include land preparation, installation of streets and/or walkways, the erection of forms, or the installation of accessory buildings not occupied as a dwelling unit or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether that alteration affects the external dimensions of the building or not.
- (s) **CRITICAL FACILITY:** Critical Facility means a structure or related infrastructure, but not the land on which it is situated, that 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.
- (t) **DEVELOPMENT:** Development means any man-made change to improved or unimproved real estate, including but not limited to buildings, agricultural buildings, accessory structures and other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.
- (u) **DIGITAL FLOOD INSURANCE RATE MAP (DFIRM):** Digital Flood Insurance Rate Map (DFIRM) means a FEMA digital floodplain map which serve as “regulatory floodplain maps” for insurance and floodplain management purposes.
- (v) **DFIRM DATABASE:** DFIRM Database means a database which usually are spreadsheets containing data and analyses that accompany DFIRMs.
- (w) **ELEVATED BUILDING:** Elevated Building means a building without a basement in Zones A1-30, AE, A, A99, AO, AH, B, C, X, and D, which have the top of the elevated floor above the water and is adequately anchored so as not to impair the structural integrity of the building during a flood of up to the 100-year flood. In the above zones, an “elevated building” also includes a building elevated by means of fill or solid foundation perimeter walls with openings sufficient to facilitate the unimpeded movement of flood waters.
- (x) **EXISTING MANUFACTURED HOME PARK OR SUBDIVISION:** A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed before the effective date of the floodplain management regulations adopted by a community.
- (y) **EXPANSION TO AN EXISTING MANUFACTURED HOME PARK OR SUBDIVISION:** The preparation of additional sites by the construction of facilities for servicing the lots on which the manufacturing homes are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

- (z) **FEDERAL REGISTER:** Federal Register means the official daily publication for Rules, proposed Rules, and notices of Federal agencies and organizations, as well as executive orders and other presidential documents.
- (aa) **FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA):** FEMA means Federal Emergency Management Agency, the agency responsible for administering the National Flood Insurance Program.
- (bb) **FLASH FLOODING:** Flash flooding means a temporary flooding condition due to the rapid accumulation and runoff of surface waters from any source and is characterized by a large volume of water over a short period of time. Also, see “flood-prone area.”
- (cc) **FLOOD OR FLOODING:** Flood or Flooding means a general and temporary condition of partial or complete inundation of normally dry land areas from the overflow of water from channels or spillways, the unusual and rapid accumulation or runoff of surface waters from any source, or mudslides or mudflows that is sufficiently fluid so as to flow over the surface of normally dry land areas. Mudflows that are proximately caused or precipitated by accumulations of water on or under the ground.
- (dd) **FLOOD INSURANCE RATE MAP (FIRM):** Flood Insurance Rate Map (FIRM) means an official map of a community on which FEMA has delineated both the Special Flood Hazard Area and the risk premium zones applicable to the community.
- (ee) **FLOOD INSURANCE STUDY (FIS):** Flood Insurance Study (FIS) means the official report provided by FEMA which contains the FIRM, as well as, flood profiles for studied flooding sources that can be used to determine Base Flood Elevations for some areas.
- (ff) **FLOODPLAIN OR FLOOD-PRONE:** Floodplain or Flood-Prone Area means an area adjacent to a river or stream which is susceptible to inundation by water as the result of a flood.
- (gg) **FLOODPLAIN ADMINISTRATOR:** Floodplain Administrator means the Grand County Community Development Director or his or her designee.
- (hh) **FLOODPLAIN DEVELOPMENT PERMIT:** Floodplain Development Permit means a permit issued by the Grand County Floodplain Administrator which is required before beginning development or construction in any area of special flood hazard.
- (ii) **FLOODPLAIN MANAGEMENT:** Floodplain Management means 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 damage prevention regulations.
- (jj) **FLOODPLAIN MANAGEMENT REGULATIONS:** Floodplain Management Regulations means Zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as a floodplain ordinance, grading ordinance and erosion control ordinance) and other applications of police power, which provide standards for the purpose of flood damage prevention and reduction.

- (kk) **FLOOD CONTROL STRUCTURE:** Flood Control Structure means a physical structure designed and built expressly or partially for the purpose of reducing, redirecting, or guiding flood flows along a particular waterway and are constructed in conformance with sound engineering standards.
- (ll) **FLOODPROOFING:** Floodproofing means a combination of provisions, changes, or adjustments to properties and structures subject to flooding primarily for the reduction or elimination of flood damage to properties, water and sanitary facilities, structures, and contents of buildings in flood hazard areas.
- (mm) **FLOODWAY OR REGULATORY FLOODWAY:** Floodway or Regulatory Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge a 100-year flood without cumulatively increasing the water surface elevation more than one-half foot.
- (nn) **FREEBOARD:** Freeboard means 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.
- (oo) **HIGHEST ADJACENT GRADE:** Highest Adjacent Grade means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.
- (pp) **LETTER OF MAP REVISION (LOMR):** Letter of Map Revision (LOMR) means FEMA's official revision of an effective FIRM, or Flood Boundary and Floodway Map (FBFM), or both.
- (qq) **LETTER OF MAP REVISION BASED ON FILL:** Letter of Map Revision Based on Fill (LOMR-F) means FEMA's modification of the SFHA shown on the FIRM based on the placement of fill outside the existing regulatory floodway.
- (rr) **LEVEE:** Levee means a man-made embankment, usually earthen, designed and constructed in accordance with sound engineering practices to contain, control, or divert the flow of water so as to provide protection from temporary flooding.
- (ss) **LEVEE SYSTEM:** Levee System means a flood protection system which consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.
- (tt) **LOWEST FLOOR:** Lowest Floor means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area, is not considered the building's lowest floor provided that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of these regulations.
- (uu) **MANUFACTURED HOME:** Manufactured Home means a structure, transportable in one or more section, which is built on a permanent chassis and is designed for use with or

without a permanent foundation when attached to the required utilities. The term “manufactured home” does not include “recreational vehicles”.

- (vv) **MANUFACTURED HOME PARK OR SUBDIVISION:** Manufactured Home Park or Subdivision means a parcel or contiguous parcels of land divided into two or more manufactured home lots for rent or sale.
- (ww) **NEW MANUFACTURED HOME PARK OR SUBDIVISION:** A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by a community.
- (xx) **MEAN SEA LEVEL:** Mean sea level means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or other datum, to which base flood elevations shown on a community’s Flood Insurance Rate Map are referred.
- (yy) **MATERIAL SAFETY DATA SHEET (MSDS):** Material Safety Data Sheet (MSDS) means a form with data regarding the properties of a particular substance. It provides procedures for handling or working with a substance in a safe manner, and includes information such as physical data (melting point, boiling point, flash point, etc.), toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and spill-handling procedures.
- (zz) **NATIONAL FLOOD INSURANCE PROGRAM:** National Flood Insurance Program (NFIP) means FEMA’s program of flood insurance coverage and floodplain management administered in conjunction with the Robert T. Stafford Relief and Emergency Assistance Act. The NFIP has applicable Federal regulations promulgated in Title 44 of the Code of Federal Regulations.
- (aaa) **NO-RISE CERTIFICATION:** No-Rise Certification means a record of the results of an engineering analysis conducted to determine whether a project will increase flood heights in a floodway and is supported by technical data and signed by a registered Colorado Professional Engineer. The supporting technical data should be based on the standard step-backwater computer model used to develop the 100-year floodway shown on the FIRM or Flood Boundary and Floodway Map (FBFM).
- (bbb) **PHYSICAL MAP REVISION (PMR):** Physical Map Revision (PMR) means FEMA’s action whereby one or more map panels are physically revised and republished and is used to change flood risk zones, floodplain and /or floodway delineations, flood elevations, and/or planimetric features.
- (ccc) **RECREATIONAL VEHICLE:** Recreational Vehicle means a vehicle which is built on a single chassis; 400 square feet or less when measured at the largest horizontal projections; 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.

- (ddd) **SPECIAL FLOOD HAZARD AREA (SFHA):** Special Flood Hazard Area (SFHA) means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year, i.e., the 100-year floodplain.
- (eee) **STRUCTURE:** Structure means, for floodplain management purposes, a walled or roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home. Structure, for insurance purposes, means a building with two or more outside rigid walls and a fully secured roof that is affixed to a permanent site or a manufactured home (also known as a mobile home) affixed to a permanent foundation.
- (fff) **SUBSTANTIAL DAMAGE:** Substantial Damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its pre-damage condition would equal or exceed fifty percent of the market value of the structure before the damage occurred.
- (ggg) **SUBSTANTIAL IMPROVEMENT:** Substantial Improvement means any improvement, repair, or reconstruction of a structure, the cost of which equals or exceeds fifty percent of the market value of the structure either before the improvement or repair is started; or, if the structure has been damaged and is being restored, before the damage occurred. This term does not include any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications identified by a local code enforcement officer and which are the minimum standards necessary, nor does the term include any alteration of a historic structure.
- (hhh) **THRESHOLD PLANNING QUANTITY:** Threshold Planning Quantity means a quantity designated for each chemical on the list of extremely hazardous substances that triggers notification by facilities to the State that such facilities are subject to emergency planning requirements.
- (iii) **VARIANCE:** Variance means a grant of relief from the requirements of these regulations which permits development in a manner that would otherwise be prohibited by these regulations.
- (jjj) **VIOLATION:** Violation means the failure of a structure or other development to comply with these regulations.
- (kkk) **WATERCOURSE:** Watercourse means a natural or artificial channel, depression, wash, slough, gulch, arroyo, stream, creek, or drainage way capable of containing or conveying water continuously, intermittently, or periodically.
- (III) **WATER SURFACE ELEVATION:** Water Surface Elevation means the height, in relation to the North American Vertical Datum (NAVD) of 1988, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

(6) STATUTORY AUTHORITY

- (a)** The legislature of the State of Colorado, in the Local Land Use Control Enabling Act (C.R.S. § 29-20-101 et. seq) and in County Planning and Building Codes (C.R.S. § 30-28-101 et. seq), has delegated to county governments the responsibility to adopt regulations designed to minimize losses due to flooding.
- (b)** 2 CCR 408, Rules and Regulations for Regulatory Floodplains in Colorado.
- (c)** Title 24, Articles 65.1, 67, and 68, C.R.S. that respectively provide for the designation, administration and regulation by local government of areas and activities of state interest, authorize the planned unit development approach to land development, and provide for the vesting of real property rights.
- (d)** Title 29, Article 20, C.R.S: Local Government Land Use Control Enabling Act of 1974.
- (e)** Title 30, Article 11, C.R.S: County powers and functions.
- (f)** Title 30, Article 15, C.R.S: County regulations under its police powers.
- (g)** Title 30, Article 28, C.R.S: Planning and building codes, subdivision exemption plats, cluster development, the establishment of a county planning commission and regional planning commissions, improvement agreements, master plans, zoning plans, and other land use planning and regulatory mechanisms, including subdivision regulations.

(6) GENERAL PROVISIONS

- (a)** The Special Flood Hazard Areas identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for Grand County," dated January 2, 2008 with accompanying Flood Insurance Rate Maps and/or Flood Boundary-Floodway Maps (FIRM and/or FBFM) and any revisions thereto are hereby adopted by reference and declared to be a part of this regulation. The FIRM is on file at the Community Development Office located at 308 Byers Avenue, Hot Sulphur Springs, CO. FIRM may be updated from time to time.
- (b)** **COMPLIANCE**
No structure or land shall hereafter be constructed, located, extended, or altered, or have its use changed without full compliance with the terms of this regulation and other applicable regulations.
- (c)** **ABROGATION AND GREATER RESTRICTIONS**
Whenever both a provision of these Regulations and any other provisions of these Regulations, or any provision in any other law, ordinance, resolution, rule or regulation of any kind, contain any restrictions covering any of the same subject matter, whichever restrictions are more restrictive or impose higher standards or requirements shall govern. This regulation is not intended to repeal, abrogate, or impair any existing easements, covenants, deed restrictions, or ordinances. However, where this regulation and easement, covenant, deed restriction, or another ordinance conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

(7) ADMINISTRATION

- (a)** **Flood Plain Development Permit**
A Floodplain Development Permit shall be obtained before any construction or

development begins within any Special Flood Hazard Areas established in Section 1.8(1) herein. A Floodplain Development Permit shall be required to ensure conformance with the provisions of these regulations. Applicants shall obtain a floodplain development permit before beginning construction or development in any Special Flood Hazard Areas (SHFA).

- (i) In no instance shall the alteration result in any increase in flood levels during the occurrence of the base flood discharge by ½ foot or six inches. [MD1]
- (ii) For those areas outside of any Special Flood Hazard Areas or those areas identified as Zone D on the FIRM, the Floodplain Administrator may require a Flood Study before the granting of a permit if the area is suspected to be a potential Special Flood Hazard Area or subject to floods or mudslides.
- (iii) Agricultural structures and accessory structures are non-residential structures, and the NFIP requires new construction and substantial improvements of non-residential structures in SFHAs to be elevated or dry floodproofed to or above the Base Flood Elevation (BFE).
- (iv) When survey data show that a development site is above the BFE, the data will be recorded and the permit can be issued.
- (v) Application for a Floodplain Development Permit shall be made on a Floodplain Development Permit form furnished by the Department of Community Development.

(b) Submittal Requirements

The application shall include:

- (i) The plan shall include (3) copies, 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.
- (ii) The plan shall include the floodplain boundaries, base flood elevations, FIRM zones and floodway boundaries shown on the Flood Insurance Rate Map, Flood Boundary Floodway Map and/or Flood Insurance Study.
- (iii) The proposed elevation, in relation to mean sea level, of the lowest floor (including the basement or cellar) of any new or substantially improved structure to be located in Zone A if base flood elevation data are available. Upon completion of the lowest floor, the permit holder shall submit to the Floodplain Administrator the as-built elevation, certified by a registered Colorado Professional Engineer.
- (iv) The proposed elevation, in relation to mean sea level, to which any new or substantially improved non-residential structure will be floodproofed. Upon completion of the floodproofed portion of the structure, the permit holder shall submit to the Floodplain Administrator the as-built floodproofed elevation, certified by a registered Colorado Professional Engineer.
- (v) Certification by a registered Colorado Professional Engineer that the floodproofing methods for any nonresidential structure meet the applicable floodproofing criteria.
- (vi) A description of the extent to which any watercourse will be altered or relocated as a result of the proposed development. Computations by a registered Colorado Professional Engineer must be submitted that demonstrate that the altered or relocated segment will provide equal or greater conveyance than the original stream segment.

- (vii) If required by the Floodplain Administrator, a technical analysis by a registered Colorado Professional Engineer, which shows whether proposed development to be located in a Special Flood Hazard Area may result in physical damage to any other property.
 - (viii) If no base flood elevation data is available from other sources for Zone A, the applicant shall provide base flood elevation data for subdivision proposals and other proposed developments (including proposals for manufactured home and recreational vehicle parks and subdivisions).
- (c) Criteria for approval or denial of an application for a floodplain development permit shall be based on the provisions of these regulations including consideration of the following relevant factors:
- (i) The danger to life and property due to flooding or erosion damage;
 - (ii) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
 - (iii) The danger that materials may be swept onto other lands to the injury of others;
 - (iv) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (v) The potential impacts to public infrastructure and possible interruption of governmental services during and after flood conditions, including maintenance and repair of streets, bridges, and public utilities and facilities such as sewer, gas, electric, and water systems;
 - (vi) The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
 - (vii) The necessity to the facility of a waterfront location, where applicable;
 - (viii) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;
 - (ix) The compatibility of the proposed use with existing and anticipated development, and;
 - (x) The relationship of the proposed use to Grand County Master Plan.

(8) APPEAL PROCEDURES

- (a) The Grand County Board of Adjustment (“BOA”) is hereby appointed to review, grant, grant with conditions, or deny appeals and requests for variances in accordance with the terms of these regulations.
- (b) The BOA shall hear and render judgment on an appeal only when it is alleged that there has been an error in any decision, determination, or requirement made by the Floodplain Administrator in the administration or enforcement of these regulations.
- (c) Any person aggrieved by the decision of the BOA may appeal such decision to the District Court for Grand County as provided in Rule 106(a)(4) of the Colorado Rules of Civil Procedure.
- (d) Appeal Considerations -In reviewing appeals or requests for variances, the BOCC shall consider all technical evaluations, other relevant factors, the provisions of these regulations, and the following:
 - (i) The danger that materials may be swept onto other lands to the injury of others;
 - (ii) The danger to life and property due to flooding or erosion damage;

- (iii) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owners;
 - (iv) The importance of services provided by the proposed facility to the community;
 - (v) The necessity to the facility of a waterfront location, where applicable;
 - (vi) The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;
 - (vii) The relationship of the proposed use to the floodplain management program for that area;
 - (viii) The safety of access to the property in times of flood for ordinary and emergency vehicles;
 - (ix) The expected heights, velocity, duration, rate of rise and sediment transport of the flood waters and the effects of wave action, if applicable, expected at the site;
 - (x) 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, streets, and bridges.
 - (xi) The compatibility of the proposed use with existing and anticipated development.
- (e) The Floodplain Administrator shall maintain a record of all actions involving appeals or requests for variance and shall report to FEMA, upon request, any variances granted.
- (f) Variance Conditions
- (i) Upon consideration of the foregoing factors and taking into account the purposes of these regulations, the BOA may attach such conditions to the granting of a variance as it deems necessary to further the purposes of these regulations.
 - (ii) Variances may be issued for the repair or rehabilitation of historic structures upon a determination that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure.
 - (iii) Variances may be issued to allow certain agricultural or accessory structures located in the SFHA to be wet flood proofed in lieu of the elevation or dry flood proofing requirement. The variance must be for an individual agricultural or accessory structure as defined in this policy. Justification for the variance must address the following:
 1. The agricultural or accessory structure must meet the definition of structure, for floodplain management purposes, where walled and roofed shall be interpreted as having at least two outside rigid walls and a fully secured roof.
 2. An accessory structure is small and represents a minimal investment.
 3. An agricultural structure has a low damage potential and is located in an A Zone (A, AE, A1-A30, AR, A99).
 4. A description of the exceptional or unnecessary hardship that the applicant would incur if a variance were not granted must be included.
 5. The agricultural or accessory structure must meet the definition of agricultural or accessory structure, including the exclusive use requirements provided in this policy.

6. The agricultural or accessory structure must be anchored to resist flotation, collapse, and lateral movement.
 7. The portions of the agricultural or accessory structure located below the BFE must be constructed with flood-resistant materials.
 8. Mechanical and utility equipment for the agricultural or accessory structure must be elevated or dry floodproofed to or above the BFE.
 9. The agricultural or accessory structure must comply with the floodway encroachment provisions of the NFIP.
 10. The agricultural or accessory structure must be wet flood proofed to protect the structure from hydrostatic pressure. The design must meet the NFIP design and performance standards for openings per 44 C.F.R. § 60.3(c)(5) and must allow for the automatic entry and exit of floodwaters without manual operation or the presence of a person (or persons).
 11. The variance must provide the minimum relief necessary.
 12. The variance must restrict use of the agricultural or accessory structure in accordance with the exclusive use requirement of the NFIP definition provided in this policy.
 13. In accordance with FEMA regulation and guidance, owing to the increased risk to public safety, a variance for wet floodproofing in lieu of elevation or dry floodproofing is not recommended for:
 - a. An agricultural structure located in a V Zone (V, VE, V1-V-30). Wet floodproofing and breakaway walls below a compliant elevated structure is permissible without a variance.
 - b. An agricultural or accessory structure which, if flooded, would create a threat to public safety, health, and welfare. Such structures include but may not be limited to confinement operations; structures with liquefied natural gas terminals; and facilities producing and storing highly volatile, toxic, or waterreactive materials. Ideally, these structures should be located outside of the SFHA; however, when located within the SFHA, these structures must be elevated or dry floodproofed in accordance with NFIP design and performance standards.
- (iv) Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.
 - (v) Variances shall only be issued upon a determination that the variance is the minimum necessary to afford relief considering the flood hazard.
 - (vi) Variances shall only be issued upon:
 - i. showing a good and sufficient cause;
 - ii. a determination that failure to grant the variance would result in exceptional hardship to the applicant which is not self-imposed, and
 - iii. 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 ordinances.

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

(9) DESIGNATION OF FLOODPLAIN ADMINISTRATOR

- (a) The Grand County Community Development Director, or his or her designee, is hereby appointed the Floodplain Administrator to administer, implement, and enforce the provisions of these regulations and other appropriate sections of Title 44 of the Code of Federal Regulations CFR (National Flood Insurance Program Regulations) concerning floodplain management by granting, granting with conditions, or denying applications for floodplain development permits.

(10) DUTIES OF FLOODPLAIN ADMINISTRATOR

(a) Permit Review

- (i) Review applications for Floodplain Development Permits for completeness and compliance with the provisions of these regulations and to determine whether proposed building sites will be reasonably safe from flooding.
- (ii) Review applications to determine whether all necessary permits have been obtained from federal, state, or local governments from which prior approval is required.
- (iii) Review applications to determine if the proposed development may result in physical damage to any other property (e.g., stream bank erosion and increased flood velocities) in the Special Flood Hazard Area. The Floodplain Administrator may require the applicant to submit additional technical analyses and data (e.g., a registered Colorado Professional Engineer's certification that no impact to upstream or downstream properties will occur) to complete the determination. If the proposed development may result in physical damage to any other property, no permit shall be issued. The applicant may revise the application to include measures that mitigate or eliminate the adverse effects and re-submit the application.
- (iv) Approve or deny applications for floodplain development permits based on the foregoing reviews and determinations. In conducting these duties, the Floodplain Administrator may seek technical assistance as necessary at the applicant's cost.

(b) Use of other Flood Data

- (i) When FEMA has designated Special Flood Hazard Areas on the community's FIRM but has not produced water surface elevation data (those areas designated Zone A on the FIRM), the Floodplain Administrator shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state or other source as criteria for requiring that new construction, substantial improvements, or other proposed development meet the requirements of these regulations.
- (ii) Or in the Administrator's discretion, the Administrator may require an applicant to hire an engineer to develop a Base Flood Elevation or develop or utilize a

methodology such as contour interpolation as described in the FEMA Publication 256 titled Managing Floodplain Development in Approximate Zone A Areas to make a recommendation on an appropriate elevation requirement on a proposed project.

- (iii) For waterways with Base Flood Elevations for which a regulatory Floodway has not been designated, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one-half foot at any point within the community.
- (c) Information to be Maintained
 - (i) Obtain and record the actual elevation (in relation to mean sea level) of the lowest floor, including the basement, of all new or substantially improved structures.
 - (ii) For all new or substantially improved floodproofed structures, verify and record the actual elevation (in relation to mean sea level) to which the structure has been floodproofed, including the basement, and maintain the floodproofing certifications.
 - (iii) Maintain for public inspection all records pertaining to the provisions of these regulations.
- (d) Alteration of Watercourses
 - (i) Notify adjacent communities and the Colorado Water Conservation Board prior to permitting any alteration or relocation of a watercourse and submit evidence of such notification to FEMA.
 - (ii) Ensure that the permit holder has provided for maintenance within the altered or relocated portion of said watercourse so that the flood carrying capacity is not diminished.
- (e) Interpretation of FIRM Boundaries
 - (i) Make interpretations, where needed, as to the exact location of the boundaries of the Special Flood Hazard Areas, i.e., where there appears to be a conflict between a mapped boundary and actual field conditions. A person contesting the location of the boundary shall have a reasonable opportunity to appeal the interpretation as provided in Section 1.8 (5-9) of these regulations.
- (f) Inspections
 - (i) The Floodplain Administrator and the permit holder or developer's engineer shall make periodic inspections at appropriate times throughout the period of construction in order to monitor compliance with permit conditions and enable the Floodplain Administrator to certify, if requested, that the development is in compliance with the requirements of the floodplain development permit or any variance provisions.
- (g) Stop Work Orders

- (i) The Floodplain Administrator shall issue, or cause to be issued, a stop work order for any floodplain development found ongoing without a floodplain development permit. Disregard of a stop work order shall subject the violator to the penalties set forth in Section 18 of these regulations.
 - (ii) The Floodplain Administrator shall issue, or cause to be issued, a stop work order for any floodplain development which is not in compliance with the conditions of the floodplain development permit and/or these regulations. Disregard of a stop work order shall subject the violator to the penalties set forth in Section 18 of these regulations.
- (h) Certificate of Compliance**
- (i) In Special Flood Hazard Areas, it shall be unlawful to occupy or to permit the use or occupancy of any building or premises, or both, or part thereof hereafter created, erected, changed, converted, or wholly or partly altered or enlarged in its use or structure until the Floodplain Administrator has issued a certificate of compliance stating that the building or land conforms to the requirements of these regulations.
 - (ii) The Floodplain Administrator shall issue a certificate of compliance upon satisfactory completion of all development in Special Flood Hazard Areas. Issuance of the certificate shall be based on inspections, any certified elevations, hydraulic data, floodproofing, or anchoring requirements which may have been required as a condition of the approved floodplain development permit.

(11) PROVISIONS FOR FLOOD HAZARD REDUCTION

- (a)** When a regulatory floodway has not been designated, the Floodplain Administrator must require that no new construction, substantial improvements, or other development (including fill) shall be permitted unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood within Zones A and AO on the community FIRM more than 1' (one foot) and within Zones AE on the community FIRM more than 6" (six inches) at any point within the community. In all Special Flood Hazard Areas, the following provisions are required for all new construction, substantial improvements, or other development:
 - (i)** All new construction or substantial improvements shall be designed (or modified) and adequately anchored to prevent flotation, collapse or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.
 - (ii)** All new construction or substantial improvements shall be constructed using methods and practices that minimize flood damage.
 - (iii)** All new construction or substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
 - (iv)** All new construction or 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.

- (v) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system.
 - (vi) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the system into flood waters.
 - (vii) On-site Wastewater Treatment Systems shall be located to avoid impairment to them or contamination from them during flooding.
- (b) Special Flood Hazard Area Standards - In all Special Flood Hazard Areas where base flood elevation data is available or has been provided, the following provisions are required:
- (i) Residential Construction. New construction and substantial improvement of a residential structure shall have the lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities (including ductwork), elevated to one foot above the base flood elevation. A registered Colorado Professional Engineer, architect, or land surveyor shall submit a certification to the Floodplain Administrator that this standard has been satisfied.
 - (ii) Nonresidential Construction including Agricultural Structures and Accessory Structures. With exception to critical facilities, new construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated to one foot above the base flood elevation, or, together with attendant utility and sanitary facilities, be designed so that one foot above the base flood elevation of the structure is watertight, with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. A registered Colorado Professional Engineer or architect shall develop and/or review structural design, specifications, and plans for the construction and shall certify that the design and methods of construction are in accordance with accepted standards of practice outlined in these regulations. The Floodplain Administrator shall maintain a record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed.
 - (iii) Manufactured Homes. All manufactured homes to be placed or substantially improved within Zone A1-30, AE, and AH on the community's FIRM shall be installed using methods and practices which minimize flood damage. In order to satisfy this requirement, manufactured 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 or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind factors. All manufactured homes that are placed or substantially improved within Zones A1-30, AE, and AH on the community's FIRM on sites (i) outside of a manufactured home park or subdivision, (ii) in a new manufactured home park or subdivision, (iii) in an expansion to an existing manufactured home park or subdivision, or (iv) in an existing manufactured

home park or subdivision on which a manufactured home has incurred substantial damage as a result of a flood shall be elevated on a permanent foundation such that the lowest floor of the manufactured home electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities (including ductwork), is elevated to one foot above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement. All manufactured homes placed or substantially improved on sites in an existing manufactured home park or subdivision within Zones A1-30, AE, or AH on the community's FIRM, that are not subject to provisions above, shall be elevated so that either (i) the lowest floor of the manufactured home electrical, heating, ventilation, plumbing, and air conditioning equipment, and other service facilities (including ductwork), is one foot above the base flood elevation, or (ii) the manufactured home chassis is supported by reinforced piers or other foundation elements of at least equivalent strength 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.

- (c) Enclosures. New construction and substantial improvements, with fully enclosed areas below the lowest floor that are usable solely for parking of vehicles, building access, or storage in an area other than a basement and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the entry and exit of floodwaters. Design for meeting this requirement must either be certified by a registered Colorado Professional Engineer or Architect or meet or exceed the following minimum criteria:
 - (i) A minimum of two openings having a total new area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.
 - (ii) The bottom of all openings shall be no higher than one foot above grade.
 - (iii) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
- (d) Recreational Vehicles. All recreational vehicles placed on sites within Zones A1-30, AH, and AE on the community's FIRM must either:
 - (ii) Be on the site for fewer than 180 consecutive days;
 - (iii) Be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions.

Meet the permit requirements of Section 11 (b) (iii) and the elevation and anchoring requirements for "manufactured homes".

- (e) Areas of Shallow Flooding (AO/AH Zones) Standards - Located within the Special Flood Hazard Area established in Section 11 (b) are areas designated as shallow flooding. These areas have special flood hazards associated with base flood depths of 1 to 3 feet where a clearly defined channel does not exist and where the path of flooding is unpredictable and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow, usually areas of ponding; therefore, the following provisions apply:

- (i) Residential Construction. All new construction and Substantial Improvements of residential structures must have the lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated above the highest adjacent grade at least one foot above the depth number specified in feet on the community's FIRM. Upon completion of the structure, the elevation of the lowest floor, including basement shall be certified by a registered Colorado Professional Engineer, architect, or land surveyor. Such certification shall be submitted to the Floodplain Administrator.
 - (ii) Nonresidential Construction. With the exception of Critical Facilities, outlined in Section 16, all new construction and Substantial Improvements of non-residential structures, must have the lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), elevated above the highest adjacent grade at least one foot above the depth number specified in feet on the community's FIRM. Attendant utility and sanitary facilities, be designed so that the structure is watertight to at least one foot above the base flood level with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy. A registered Colorado Professional Engineer or Architect shall submit a certificate to the Floodplain Administrator that the standards of this Section are satisfied.
 - (iii) Within Zones AH or AO, adequate drainage paths around structures on slopes are required to guide flood waters around and away from proposed structures.
- (f) Exceptions Floodplain Management Requirements for Agricultural Structures and Accessory Structures.
- (i) Agricultural Structures Only. Per Section 1315(a)(2)(A) of the National Flood Insurance Act of 1968 (NFIA), agricultural structures located in the SFHA that are designated as repetitive loss, as defined in the NFIA, or substantially damaged by flood may be repaired and restored to pre-damaged conditions under the following criteria:
 - a. Damage must be from flooding alone and must meet the community's substantial damage threshold. If damage is caused by other hazards, or a mix of hazards, the agricultural structure must meet elevation or dry floodproofing requirements when repaired or restored or wet floodproofing if it qualifies per this policy.
 - b. The language of the local jurisdiction's land use provision must be reviewed and approved by FEMA to confirm consistency with the NFIP design and performance standards, and it must be incorporated into the local floodplain management regulations.
 - c. The repair or restoration must be to pre-damaged condition only. Substantial improvements require the agricultural structure to meet elevation or dry floodproofing requirements or wet floodproofing if it qualifies per this policy.
 - d. Repair and restoration to pre-damaged condition requires issuance of a floodplain development permit for each occurrence.
 - e. In accordance with Section 1315(a)(2)(C) of the NFIA, disaster assistance under any program administered by the Administrator or any

other federal agency is not available for agricultural structures repaired or restored to pre-damaged condition.

- f. In accordance with Section 1315(a)(2)(8) of the NFIA, FEMA may deny federal flood insurance coverage unless the agricultural structure is wet floodproofed, consistent with the design and performance standards of 44 C.F.R. § 60.3(c)(5).

(12) SUBDIVISION REGULATIONS

- (a) All subdivision proposals shall be consistent with the need to minimize flood damage.
- (b) All subdivision proposals shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- (c) All subdivision proposals shall have adequate drainage provided to reduce exposure to flood damage.
- (d) When no base flood elevation data are available from other sources, or if the proposed development site is located in a Zone A, the applicant shall provide base flood elevation data for subdivision proposals and other proposed developments (including proposals for manufactured home and recreational vehicle parks and subdivisions) which is greater than 50 lots or 5 acres, whichever is lesser.
- (e) All proposals for the development of subdivisions including the placement of manufactured home parks and subdivisions shall meet Floodplain Development Permit requirements of these regulations.

(13) FLOODWAY STANDARDS

- (a) The following standards for floodways are in addition to the standards for Special Flood Hazard Areas. Because the floodway is an extremely hazardous area due to the velocity of floodwaters that carry debris, potential projectiles, and danger of erosion, the following provisions apply:
 - (i) Encroachments are prohibited, including fill, new construction, substantial improvements and other development within the adopted regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed by a registered Colorado Professional Engineer in accordance with standard engineering practice that the proposed encroachment would not result in any increase (requires a No Rise Certification) in flood levels within the community during the occurrence of the base flood discharge.
 - (ii) All new construction and substantial improvements shall comply with all applicable flood hazard reduction provisions located in section 1.11.
 - (iii) Alteration of any channel of any perennial stream shall be prohibited except as may be required for improvement to wildlife habitat or public health, safety, and welfare. In no instance shall the alteration result in the increase in flood levels during the occurrence of the base flood discharge as certified by a registered Colorado Professional Engineer.
 - (iv) Under the provisions of 44 CFR Chapter 1, Section 65.12 of the National Flood Insurance Regulations, a community may permit encroachment within the adopted regulatory floodway that would result in an increase in base flood

elevations provided that the community first applies for and receives a Conditional Letter of Map Revision (CLOMR) and floodway revision through FEMA.

(14) ALTERATION OF A WATERCOURSE STANDARDS

- (a) Channelization and flow diversion projects shall appropriately consider issues of sediment transport, erosion, deposition, and channel migration and properly mitigate potential problems through the project, as well as upstream and downstream of any improvement activity. A detailed analysis of sediment transport and overall channel stability should be considered, when appropriate, to assist in determining the most appropriate design.
- (b) Channelization and flow diversion projects shall evaluate the residual 100-year floodplain.
- (c) Any channelization or other stream alteration activity proposed by a project proponent must be evaluated for its impact on the regulatory floodplain and be in compliance with all applicable Federal, State and local floodplain rules, regulations, and ordinances.
- (d) Any stream alteration activity shall be designed and sealed by a registered Colorado Professional Engineer or Certified Professional Hydrologist.
- (e) All activities within the regulatory floodplain shall meet all applicable Federal, State and Grand County floodplain requirements and regulations.
- (f) Within the Regulatory Floodway, watercourse alteration activities shall not be constructed unless the project proponent demonstrates through Floodway analysis and report, sealed by a registered Colorado Professional Engineer, that there is not more than a 0.00-foot rise in the proposed conditions resulting from the project compared to existing conditions, unless the community first applies to FEMA for a CLOMR and Floodway revision in accordance with these regulations. Such studies are known as a No-Rise Certification.

(15) PROPERTIES REMOVED FROM THE FLOODPLAIN BY FILL STANDARDS

- (a) A Floodplain Development Permit shall not be issued for the construction of a new structure or addition to an existing structure on a property removed from the floodplain by the issuance of a FEMA Letter of Map Revision of Fill (LOMR-F), unless such new structure or addition complies with the following:
 - (i) Residential Construction. The lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to one foot above the Base Flood Elevation that existed prior to the placement of fill.
 - (ii) Nonresidential Construction. The lowest floor (including basement), electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities (including ductwork), must be elevated to two feet above the Base Flood Elevation that existed prior to the placement of fill, or together with attendant utility and sanitary facilities be designed so that the structure or addition is watertight to at least one foot above the base flood level that existed prior to the placement of fill with walls substantially impermeable to the passage

of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads of effects of buoyancy.

(16) CRITICAL FACILITIES STANDARDS

- (a)** A Critical Facility is a structure or related infrastructure, but not the land on which it is situated, as specified in Rule 6 of the Rules and Regulations for Regulatory Floodplains in Colorado, that 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.
- (b)** Classification for Critical Facilities - It is the responsibility of Grand County to identify and confirm that specific structures in the community meet the following criteria:
 - (i)** Essential Services Facilities treatment plants (WWTP), non-potable water treatment and distribution systems, and hydroelectric power generating plants and related appurtenances. Public utility plant facilities may be exempted if it can be demonstrated to the satisfaction of the County that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same utility or available through an intergovernmental agreement or other contract) and connected, the alternative facilities are either located outside of the 100-year floodplain or are compliant with the provisions of this section, and an operations plan is in effect that states how redundant systems will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the County on an as-needed basis upon request. Essential service facilities may include:
 - (ii)** Public safety (police stations, fire and rescue stations, emergency vehicle and equipment storage, and, emergency operation centers);
 - (iii)** Emergency medical (hospitals, ambulance service center, 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);
 - (iv)** Designated emergency shelters;
 - (v)** 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);
 - (vi)** 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
 - (vii)** 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]).

- (c) Hazardous Materials Facilities - These facilities include those that produce or store highly volatile, flammable, explosive, toxic and/or water-reactive materials. These facilities may include:
 - (i) Chemical and pharmaceutical plants;
 - (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 ground gasoline or propane storage or sales centers.
- (d) Facilities shall be determined to be Critical Facilities if they produce or store materials in excess of threshold limits. If the owner of a facility is required by the Occupational Safety and Health Administration (OSHA) to keep a Material Safety Data Sheet (MSDS) on file for any chemicals stored or used in the work place, AND the chemical(s) is stored in quantities equal to or greater than the Threshold Planning Quantity (TPQ) for that chemical, then that facility shall be considered to be a Critical Facility. The TPQ for these chemicals is: either 500 pounds or the TPQ listed (whichever is lower) for the 356 chemicals listed under 40 C.F.R. § 302 (2010), also known as Extremely Hazardous Substances (EHS); or 10,000 pounds for any other chemical. This threshold is consistent with the requirements for reportable chemicals established by the Colorado Department of Health and Environment. OSHA requirements for MSDS can be found in 29 C.F.R. § 1910 (2010). The Environmental Protection Agency (EPA) regulation “Designation, Reportable Quantities, and Notification,” 40 C.F.R. § 302 (2010) and OSHA regulation “Occupational Safety and Health Standards,” 29 C.F.R. § 1910 (2010) are incorporated herein by reference and include the regulations in existence at the time of the promulgation of these regulations, but exclude later amendments to or editions of the regulations. The following exemptions shall not apply to buildings or other structures that also function as Critical Facilities under another category outlined in this section. Specific exemptions to this category include:
 - (i) Finished consumer products within retail centers and households containing hazardous materials intended for household use, and agricultural products intended for agricultural use.
 - (ii) Buildings and other structures containing hazardous materials for which it can be demonstrated to the satisfaction of the local authority having jurisdiction by hazard assessment and certification by a qualified professional (as determined by the local jurisdiction having land use authority) that a release of the subject hazardous material does not pose a major threat to the public.
 - (iii) Pharmaceutical sales, use, storage, and distribution centers that do not manufacture pharmaceutical products.
- (e) At-Risk Population Facilities:
 - (i) Elder Care;
 - (ii) Congregate care serving 12 or more individuals (day care and assisted living);

- (iii) Public and private schools (pre-schools, K-12 schools), before school and after-school care serving 12 or more children
- (f) Facilities Vital to Restoring Normal Services Including Government Operations- These facilities may be exempted if it is demonstrated to the County that the facility is an element of a redundant system for which service will not be interrupted during a flood. At a minimum, it shall be demonstrated that redundant facilities are available (either owned by the same entity or available through an intergovernmental agreement or other contract), the alternative facilities are either located outside of the 100-year floodplain or are compliant with this ordinance, and an operations plan is in effect that states how redundant facilities will provide service to the affected area in the event of a flood. Evidence of ongoing redundancy shall be provided to the County of Grand on an as-needed basis upon request. These facilities consist of:
 - (i) Essential government operations (public records, courts, jails, building permitting and inspection services, community administration and management, maintenance and equipment centers);
 - (ii) Essential structures for public colleges and universities (dormitories, offices, and classrooms only).
- (g) Protection for Critical Facilities - All new and substantially improved Critical Facilities and new additions to Critical Facilities located within a Special Flood Hazard Area shall be regulated to a higher standard than structures not determined to be Critical Facilities. For the purposes of these regulations, protection shall include one of the following:
 - (i) Location outside the Special Flood Hazard Area; or
 - (ii) Elevation of the lowest floor or floodproofing of the structure, together with attendant utility and sanitary facilities, to at least two feet above the Base Flood Elevation.
- (h) Ingress and Egress for New Critical Facilities
 - (a) New Critical Facilities shall, when practicable as determined by Grand County, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 100-year flood event.

(17) SEVERABILITY

- (a) In the interpretation and enforcement of these regulations, all provisions shall be held to be minimum requirements, liberally construed in favor of the governing body, and deemed neither to limit nor repeal any other powers granted under state law. If any portion of these regulations are declared by the courts to be unconstitutional, such decision shall not invalidate any other provision of these regulations.

(18) ENFORCEMENT AND PENALTIES

- (a) These regulations meet the minimum requirements as set forth by the Colorado Water Conservation Board and the National Flood Insurance Program. Any infraction of the provisions of these regulations by failure to comply with any requirements (including infractions of conditions and safeguards established in connection with an approved permit) shall constitute a violation. Any person who violates these regulations commits a misdemeanor under C.R.S. § 30-28-124, as amended, and shall, upon conviction thereof, be fined or imprisoned or both as provided therein. Each day of noncompliance shall

constitute a separate offense. Nothing herein shall prevent Grand County from taking such other lawful action necessary to prevent or remedy a violation, including but not limited to actions for declaratory or injunctive relief as well as actions for civil penalties under C.R.S. § 30-28-124.5.

(19) WARNING AND DISCLAIMER OF LIABILITY

- (a)** The degree of flood protection required by these regulations is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Flood heights may be increased by manmade or natural causes. These regulations do not imply that land outside the Special Flood Hazard Areas or uses permitted within such areas will be free from flooding or flood damages. These regulations shall not create liability on the part of Grand County, any official or employee thereof, or FEMA for any flood damages that result from reliance on these regulations or any administrative decision lawfully made thereunder.