



## URBAN DRAINAGE AND FLOOD CONTROL DISTRICT

### Floodplain Regulation

Adopted by: Resolution No. 11, Series of 1970  
Amended by: Resolution No. 26, Series of 1974  
Resolution No. 2, Series of 1979  
Resolution No. 2, Series of 1980  
Resolution No. 2, Series of 2013

**SECTION 1.0 PURPOSES.** To promote the public health, safety, and general welfare, to minimize flood losses in areas subject to flood hazards, and to promote wise use of the floodplain, this Floodplain Regulation has been established with the following purposes intended:

- 1.1 To reduce the hazards of floods to life and property by:
  - 1.11 Prohibiting certain uses which are dangerous to life or property in time of flood.
  - 1.12 Restricting uses which would be hazardous to the public health in time of flood.
  - 1.13 Restricting uses which are particularly susceptible to flood damage, so as to alleviate hardship and eliminate demands for public expenditures for relief and protection.
  - 1.14 Requiring permitted floodplain uses, including public facilities which serve such uses, to be protected against floods by providing flood proofing and general flood protection at the time of initial construction.
- 1.2 To alert floodplain occupants or potential occupants to flood damages, which may result from their own, or other, land use and which is or may be undertaken without full realization of the danger by:
  - 1.21 Regulating the manner in which structures designed for human occupancy may be constructed so as to prevent danger to human life within such structures.
  - 1.22 Regulating the method of construction of water supply, sanitation systems and other utilities, so as to prevent disease, contamination, and unsanitary conditions.
  - 1.23 Delineating and describing areas that could be inundated by floods so as to protect individuals from purchasing floodplain lands for purposes which are not in fact suitable.
- 1.3 To protect the public from the burden of avoidable financial expenditures for flood control and relief by:

- 1.31 Regulating all uses within the floodplain areas so as to produce a method of construction and a pattern of development which will minimize the probability of damage to property and loss of life or injury to the inhabitants of the flood hazard area.
- 1.4 To protect the storage capacity of floodplains and to assure retention of sufficient floodway area to convey flood flows which can reasonably be expected to occur by:
  - 1.41 Regulating filling, dumping, dredging, and alteration of channels by deepening, widening, or relocating.
  - 1.42 Prohibiting unnecessary and damage-creating encroachments.
  - 1.43 Encouraging open space uses such as agriculture and recreation.
- 1.5 To protect the hydraulic characteristics of the small watercourses, including the gulches, sloughs, and artificial water channels used for conveying flood waters, which make-up a portion of the urban drainage system by:
  - 1.51 Regulating filling, dumping, and channelization so as to maintain natural storage capacity and slow flow characteristics.
  - 1.52 Prohibiting encroachment into the small watercourses to maintain their water carrying capacity.
  - 1.53 Encouraging uses such as greenbelt, open space, recreation and riding trails.

SECTION 2.0 GENERAL PROVISIONS.

- 2.1 Jurisdiction: The jurisdiction of this section includes all lands adjacent to any watercourse within the Urban Drainage and Flood Control District that would be inundated by the 100-year flood for that watercourse as defined in the Definitions section of this Resolution, and areas removed from the floodplain by the placement of fill.
- 2.2 District Types: The Flood Regulatory District covers the 100-year floodplain. Where deemed to be in the public interest by the Urban Drainage and Flood Control District, and to promote wise use of the floodplain, the Flood Regulatory District may be subdivided into the Floodway District and the Flood Storage District.

The Flood Regulatory District is defined by computing the 100-year floodplain limits under existing channel and floodplain conditions.

Subdivision of the Flood Regulatory District into the Floodway District and the Flood Storage District must not cause a 100-year flood water surface profile rise of more than one-half foot above that for the Flood Regulatory District based on the assumption that there will be an equal degree of encroachment extending for a significant "reach" on both sides of the stream.

The subdivision of the Flood Regulatory District and accompanying hydraulic studies must be based upon all of the Flood Storage District reach being filled. Creation of the Floodway District and Flood Storage District must be made only with the full understanding that such subdivision may tend to increase flood peaks downstream.

- 2.3 Boundaries: The boundaries of the Flood Regulatory District shall be as they appear on the floodplain maps kept on file with the Executive Director, Urban Drainage and Flood Control District. The boundary lines on the map shall be determined by the use of the scale appearing on the map. Where there is a conflict between the boundary lines illustrated on the map and actual field conditions, the dispute shall be settled according to *Section 7.3, Mapping Disputes* of this Regulation.
- 2.4 Interpretation: In the Floodplain Administrator's interpretation and application, the provisions of this Regulation shall be held to be minimum requirements and shall be liberally construed in favor of the governing body and shall not be deemed a limitation or repeal of any other powers granted by Colorado Statutes.
- 2.5 Warning and Disclaimer of Liability: The degree of flood protection intended to be provided by this section is considered reasonable for the regulatory purposes and is based on engineering and scientific methods of study. Larger floods may occur on occasions or the flood height may be increased by man-made or natural causes, such as ice jams and bridge openings restricted by debris. This Regulation does not imply the areas outside floodplain area boundaries or land uses permitted within such areas will always be very free from flooding or flood damage. Nor shall this section create a liability on the part of or a cause of action against the Urban Drainage and Flood Control District or any officer or employee thereof for any flood damages that may result from reliance on this Regulation.
- 2.6 Adoption of Floodplain Maps: The location and boundaries of the Flood Regulatory District established by this regulation shall be as they appear on the maps and profiles contained in engineering reports adopted after a public hearing by the Board of Directors. The Board of Director may designate Floodway and Flood Storage Districts by adopting floodway tables contained in the above mentioned engineering reports after a public hearing. Each change in the official maps shall be subject to the Amendment procedure as required in *Section 7.3, Mapping Disputes*. For the purpose of final determination of the floodplain limits, the flood profile shall control. The adopted maps and flood profiles shall be on file with the County Clerk and Recorder of the county in which the floodplain is located.

### SECTION 3.0 NONCONFORMING USES

- 3.1 The existing lawful use of a structure or premises which is not in conformity with the provisions of this Regulation may be continued subject to the following conditions:

- 3.11 No such use shall be expanded or enlarged except in conformity with the provisions of this Regulation.
- 3.12 Substantial improvement, as herein defined, to any nonconforming structure or use must result in the permanent change of the structure or use to a conforming use.
- 3.13 If such use is discontinued for twelve (12) consecutive months, any future use of the building and premises shall conform to this Regulation.
- 3.14 Uses or adjuncts thereof which are public nuisances shall not be permitted to continue as nonconforming uses.
- 3.15 Any alteration, addition, or repair to any existing nonconforming structure shall be protected, where applicable, by flood proofing measures pursuant to *Section 7.45 (1), Flood Proofing*, of this Regulation.

#### SECTION 4.0 FLOOD REGULATORY DISTRICT

- 4.1 Application: The provisions for this district apply to all floodplains of watercourses in the Urban Drainage and Flood Control District of Colorado, for which 100-year flood data and corresponding elevations or profiles are available.
- 4.2 Description of District: The Flood Regulatory District shall include the areas delineated on the maps and profiles for the 100-year floodplain limits for the watercourses adopted by the Board of Directors in accordance with *Section 2.6, Adoption of Floodplain Maps*, of this Regulation.
- 4.3 Special Provisions: The following regulations shall apply to all uses within the Flood Regulatory District, notwithstanding that such uses may be permitted under the terms of this Regulation.
  - 4.31 No new construction; substantial improvement; fill, including fill for roads and levees; deposit; obstruction; as herein defined; storage of materials, or other floodplain uses shall be permitted that decreases the efficiency or the capacity of the floodway.
  - 4.32 No floodplain use shall adversely affect the efficiency of or unduly restrict the capacity of the channels or floodways of any tributaries to the main stream, drainage ditches, or any other drainage facilities or systems.
  - 4.33 All new construction and substantial improvements shall be anchored to prevent flotation, collapse or lateral movement of the structure.
  - 4.34 All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
  - 4.35 All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage.

- 4.36 All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system; and all new and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharges from the system into flood waters.
- 4.37 Onsite waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- 4.38 All mobile homes to be placed within the Flood Regulatory District shall be anchored to resist flotation, collapse, or lateral movement by providing over the top and frame ties to ground anchors. Specific requirements shall be that:
  - (1) Over-the-top ties be provided at each of the four corners of the mobile home, with two additional ties per side at intermediate locations and mobile homes less than fifty feet long requiring one additional tie per second.
  - (2) Frame ties be provided at each corner of the home with five additional ties per side at intermediate points and mobile homes less than fifty feet long requiring four additional ties per side;
  - (3) All components of the anchoring system be capable of carrying a force of 4800 pounds; and
  - (4) Any additions to the mobile home be similarly anchored.

4.4 Description of Uses

Permitted Uses: The following open uses shall be permitted within the Flood Regulatory District to the extent that they are not prohibited in a particular area by any underlying county or city zoning ordinance or regulation.

- 4.41 Agricultural uses such as: general farming, pasture, truck farming, forestry, sod farming, and wild crop harvesting;
- 4.42 Industrial-commercial uses such as: loading areas, parking areas, airport landing strips, and storage yards for equipment or machinery easily moved or not subject to flood damage;
- 4.43 Public and private recreational uses not requiring "permanent or temporary structures" designed for human habitation such as: parks, swimming areas, golf courses, driving ranges, picnic grounds, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, and hunting, fishing and hiking areas;
- 4.44 Utility facilities such as: flowage areas, transmission lines, pipelines, water monitoring devices, roadways, and bridges.

4.5 Special Exceptions: Any use enumerated in subsections 4.51 through 4.55 may be permitted only upon the issuance of a special exception permit by the Floodplain

Administrator as provided in *Section 7.4, Special Exception Permits*, of this Regulation.

- 4.51 Residential Construction. New construction or substantial improvement of any residential structure may be permitted only upon a finding by the Floodplain Administrator that the lowest floor, including basement, is to be elevated to or above the flood protection elevation. As a condition of such finding, such condition shall be certified by a Colorado registered professional engineer, architect, or land surveyor to the Floodplain Administrator. This includes structures placed on areas removed from the floodplain by fill.
- 4.52 Non-residential Construction. New construction or substantial improvement of any commercial, industrial or other non-residential structure may be permitted only upon a finding by the Floodplain Administrator that the lowest floor, including basement, is to be elevated to or above the flood protection elevation or, together with attendant utility and sanitary facilities, is to be flood proofed so that below the flood protection elevation the structure is water tight and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. This includes structures placed on areas removed from the floodplain by fill. A Colorado registered professional engineer or architect shall certify to the Floodplain Administrator that the standards of this subsection are satisfied.
- 4.53 Mobile Homes. New mobile home parks and mobile home subdivisions, expansions of existing mobile home parks and mobile home subdivisions, and existing mobile home parks and mobile home subdivisions where the repair, reconstruction, or improvement of the street utilities and pads equals or exceeds 50 percent of the value of the streets, utilities and pads before the repair, reconstruction or improvement has commenced and for mobile home subdivision, may be permitted only upon a finding by the Floodplain Administrator that:
- a) Stands or lots will be elevated on compacted fill or on pilings so that the lowest floor of the mobile home will be elevated to or above the flood protection elevations; and
  - b) Adequate surface drainage and access for a hauler will be provided.
- This includes mobile home parks placed on areas removed from the floodplain by fill.
- 4.54 Fills or Deposits of Materials may be permitted only upon a finding by the Floodplain Administrator that:
- (1) Any fill or deposit of materials will comply with the *Section 4.3 Special Provisions*, of this Regulation; and
  - (2) The fill or deposit of materials will have some beneficial purpose and the amount thereof will not be greater than is necessary to

achieve that purpose, as demonstrated by a plan submitted by the owner showing the final dimensions of the proposed fill or other material and the use to which the filled land will be put;

- (3) The fill or deposit of materials does not imprudently reduce the flood storage capacity of the waterway and the other requirements of this section are met; and the fill or deposit of materials does not encroach on that portion of the floodplain which would have significant flow during the flood, and which for that reason would help convey the flood waters. Any filling that reduces the hydraulic capacity requires appropriate hydraulic studies and a review of the urban impact of such reduction.
- (4) The fill or other materials will be protected against erosion by rip-rap, strong vegetative cover or bulk heading.

4.55 The storage or processing of materials that are buoyant, flammable, toxic, explosive, or in times of flooding, could be injurious to human, animal, or plant life, shall be at or above the flood protection elevation for the particular area. Solid waste disposal facilities, such as junkyards or areas for the dumping of refuse shall also require a permit from the Board of Directors.

4.56 Uses very similar in nature to permitted uses may also be allowed provided that they are consistent with the provisions of this Regulation.

## SECTION 5.0 FLOODWAY DISTRICT

- 5.1 Application: Section 4.1, Application, Flood Regulatory District, of this Regulation shall apply thereto.
- 5.2 Description: The Floodway District shall include the areas designated by the Board of Directors in accordance with *Section 2.6, Adoption of Floodplain Maps*.
- 5.3 Special Provisions. The following additional provisions shall apply to all uses within the Floodway District.
  - 5.31 No encroachments, including fill, new construction, substantial improvements, or other development shall be permitted within the Floodway District that would result in any increase in flood levels during the occurrence of the 100-year flood.
  - 5.32 No mobile homes or recreational vehicles shall be placed in the Floodway District.
  - 5.33 No building designed for human occupancy shall be placed in the Floodway District.
- 5.4 Description of Uses: The open uses that are permitted in *Section 4.4, Description of Uses*, Flood Regulatory District of this Regulation are permitted, provided that

such use does not include any filling or deposit of materials, and the capacity of the floodway is left completely unimpaired.

## SECTION 6.0 FLOOD STORAGE DISTRICT

- 6.1 Application: Section 4.1, Application, Flood Regulatory District, of this Regulation shall apply thereto.
- 6.2 Description of District: The Flood Storage District shall include the area designated by the Board of Directors in accordance with Section 2.6, Adoption of Floodplain Maps of this Regulation.
- 6.3 Special Provisions
  - 6.31 The provisions of Sections 4.3 and 4.5 shall apply to all uses in the Flood Storage District.
  - 6.32 Within areas of shallow flooding all new construction and substantial improvement of residential structures may be permitted only upon a finding of the Floodplain Administrator that the lowest floor, including basement, will be elevated one foot above the crown of the nearest street or one foot above the depth specified on the map, whichever is higher.
  - 6.33 Within areas of shallow flooding all new construction and substantial improvement of non residential structures may be permitted only upon a finding of the Floodplain Administrator that the lowest floor, including basement, will be elevated one foot above the crown of the nearest street; or the highest adjacent grade of the structure will be one foot above the depth specified on the map, whichever is higher; or together with attendant utility and sanitary facilities, will be completely floodproofed to or above that level so that any space below that level 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.
  - 6.34 All new and substantially improved critical facilities and new additions to critical facilities in the Flood Storage District shall be elevated or floodproofed to at least one foot above the flood protection elevation.
  - 6.35 New critical facilities shall, when practicable, have continuous non-inundated access (ingress and egress for evacuation and emergency services) during a 100-year flood event.



## SECTION 7.0 ADMINISTRATION

- 7.1 Floodplain Administrator: The Floodplain Administrator shall administer the provision of this Regulation.
- 7.2 Special Exception Permit: A special exception permit must be obtained from the Floodplain Administrator before any new land use not expressly allowed by this Regulation may be initiated.
- 7.3 Mapping Disputes: The following procedure shall be used by the Floodplain Administrator in deciding contested cases in which the location of a district boundary is disputed:
- 7.31 In all cases the person contesting the location of the district boundary shall be given the opportunity to submit his own technical evidence if he so desires. The Administrator shall not allow deviations from the boundary line as mapped unless the evidence clearly and conclusively establishes that the mapped location of the line is incorrect.
  - 7.32 The Administrator shall render a written opinion within 30 days following receipt of the applicant's technical evidence setting forth the findings of fact and the reasons for the decision.
  - 7.33 Contestants shall have the right to appeal such decisions to the Floodplain Board of Adjustment. Such appeal must be made within 30 days.
- 7.4 Special Exception Permits
- 7.41 Application for: Any use listed in this Regulation as requiring a special exception permit may be allowed only upon the issuance of a special exception permit by the Floodplain Administrator.
  - 7.42 Procedure to be followed in Passing on Special Exception Permits: Pursuant to a Special Exception Permit Application the Administrator may:
    - (1) Require the applicant to submit, at the time of application, two copies of an aerial photograph, or a plan certified by a registered engineer, competent in open channel hydraulics, which accurately locates the floodplain proposal with respect to the district limits, channel of stream, existing floodplain development, together with all pertinent information such as the nature of the proposal; legal description of the property; fill limits and elevations; building floor elevations; and flood proofing measures.
    - (2) Require the applicant to furnish such of the following additional information as is deemed necessary by the Administrator for the evaluation of the effects of the proposal under flood flows and floodplain storage and to render a decision of the proposed floodplain use.

- (a) A typical valley cross-section showing the channel of the stream, the floodplain adjoining each side of channel, cross-sectional area to be occupied by the proposed development, and high water information.
- (b) Plan (surface view) showing elevations or contours of the ground; pertinent structure, fill or storage elevations; size, location and spatial arrangement of all proposed and existing structures on the site; location and elevations of streets, water supply, sanitary facilities, and soil types and other pertinent information.
- (c) Profile showing the slope of the bottom of the channel or thalweg of the stream and existing and proposed 100-year water surface profiles.
- (d) Specifications for building construction and materials, "flood proofing," filling, dredging, grading, channel improvement, storage of materials, water supply, and sanitary facilities.
- (e) Hydraulic calculations for all proposed channelization.

The Administrator shall render, within 30 days of receipt of all necessary application documents, and materials, a written decision granting or denying a permit application. If a denial is made, the decision shall set forth the Administrator's findings of fact and reasons for the denial. Applicants shall have the right to appeal any adverse findings or decision to the Floodplain Board of Adjustments. Such appeal must be made within 30 days.

- 7.43 Factors upon which the decision of the Floodplain Administrator shall be based: The determination of the Administrator on each special exception permit application shall be based on the effects of the proposed land use with respect to the objectives and purposes of this Regulation.
- 7.44 Conditions Attached to Special Exception Permits: Upon consideration of the factors listed above and the purposes of this Regulation, the Floodplain Administrator may attach such conditions as he deems necessary in furthering the purposes of this Regulation. Such conditions may include specifications for, without limitation because of specific enumeration, modification of other waste disposal methods and facilities, landscaping, periods of operation, operational controls, sureties, deed restriction and adequate flood proofing.
  - (1) Floodproofing. Special exceptions requiring flood proofing measures such as the following shall be designed consistent with the food protection elevation for the particular areas and flood velocities, forces and other factors associated with the flood protection elevation.

The Administrator shall require that the applicant submit a plan or document certified by a registered professional engineer that the flood proofing measures are consistent with the flood protection elevation for the particular area.

- (a) Anchorage to resist flotation and lateral movement.
- (b) Installation of watertight doors, bulkheads and shutters.
- (c) Reinforcement of walls to resist water pressures.
- (d) Use of paints, membranes or mortars to reduce seepage of water through walls.
- (e) Addition of mass or weight to structures to resist flotation.
- (f) Installation of pumps to lower water levels in structures.
- (g) Construction of water supply and waste treatment systems to prevent the entrance of flood waters.
- (h) Pumping facilities for subsurface drainage systems for buildings to relieve external foundation wall and basement floor pressure.
- (i) Construction to resist rupture or collapse, caused by water pressure or floating debris.
- (j) Cutoff valves on sewer lines or the elimination of gravity flow basement drains.

## SECTION 8.0 CERTIFICATE OF COMPLIANCE

- 8.1 No vacant land shall be occupied or used and no buildings shall hereafter be erected, altered, or moved on any floodplain of any water course nor shall such buildings be occupied until a certificate of compliance shall have been issued by the Floodplain Administrator, indicating that the use or proposed use complies with the provisions herein. A certificate shall be applied for upon completion of any project, construction, or use for which a special exception permit was granted and the excepted land use shall not commence until a certificate is issued.
- 8.2 The Floodplain Administrator shall request the applicant, when applicable, to submit a certification by a registered professional engineer that the finished fill and building floor elevations, flood proofing measures, or other flood protection factors were accomplished in compliance with the provisions of this Regulation. The Floodplain Administrator shall within ten days after receipt of such certification from the applicant issue a certificate of compliance only if the building or premise and the proposed use thereof conform with all the requirements of this Regulation.

- 8.3 The Administrator shall issue a certificate upon receipt of proof that a use or structure is expressly permitted by this Regulation, such as those uses listed in Section 4.4.

#### SECTION 9.0 ENFORCEMENT AND PENALTIES

- 9.1 Every structure, building, fill or development placed or maintained within any floodplain in violation of this Regulation is a public nuisance and the creation thereof may be enjoined and maintenance thereof may be abated by action at suit of the City, Town, or County in which it is located or by the Urban Drainage and Flood Control District or any citizen thereof. Any person who places or maintains any structure, building, fill or development within any floodplain in violation of this Regulation may be fined not more than \$500 for each offense. Each day during which such violation exists is a separate offense.

#### SECTION 10.0 AMENDMENTS

- 10.1 The Board of Directors of the Urban Drainage and Flood Control District of Colorado may from time to time alter, supplement or change the District boundaries and the provisions contained in this Regulation in the manner provided by law.
- 10.11 Amendments to this Regulation may be made on petition of any interested party in accordance with the provisions of the Colorado Revised Statutes.
- 10.12 The subdivisions of the Flood Regulatory District into the Floodway District and Flood Storage District will only be made by action of the Board of Directors of the Urban Drainage and Flood Control District.

#### SECTION 11.0 DEFINITIONS

Unless specifically defined below, words or phrases used in this Regulation shall be interpreted so as to give them the same meaning as they have at common law and to give this Regulation its most reasonable application.

- 11.1 Channel - that area of a watercourse where water normally flows and not that area beyond where vegetation exists.
- 11.X Critical Facility - 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 or after a flood.
- 11.2 Encroachment Lines – are limits of obstruction to flood flows. These lines are generally parallel to the stream. The lines are established by assuming that the area landward (outside) of the encroachment lines may be ultimately developed in such a way that it will not be available to convey flood flows. The stream channel and

adjoining floodplains between these lines will be maintained as open space and will be adequate to convey the 100-year flood without adversely increasing flood heights, such increase under any condition not exceeding one-half foot.

- 11.3 Equal Degree of Encroachment – is established by considering the effect of encroachments on the hydraulic efficiency of the floodplain along a significant reach of the stream, on both sides.
- 11.4 Flood – a general and temporary condition of partial or complete inundation of normally dry land areas from (a) the overflow of streams, rivers, or other inland water, or (b) the unusual and rapid accumulation or runoff of surface waters from any source.
- 11.5 Floodplain – an area adjacent to a watercourse, which area is subject to flooding as the result of the occurrence of the 100-year flood and which area this is so adverse to past, current, or foreseeable construction or land use as to constitute a significant hazard to public health and safety or to property.
- The term includes, but is not limited to:
- (a) Mainstream floodplains;
  - (b) Debris-fan floodplains; and
  - (c) Dry wash channels and dry wash floodplains.
- 11.6 Flood Regulatory District – that portion of the floodplain subject to inundation by the 100-year flood. The Regulatory District may be subdivided into the Floodway District and the Flood Storage District.
- 11.7 Flood Storage District – the fringe portion of the Flood Regulatory District in which flows are characteristically of shallow depths and low velocities.
- 11.8 Floodway District – that portion of the Flood Regulatory District required for the reasonable passage or conveyance of the 100-year flood which is characterized by hazardous and significant depths and velocities.
- 11.9 Flood Profile – a graph or a longitudinal profile showing the relationship of the water surface elevation of a flood event to location along a stream or river.
- 11.10 Flood Proofing – a combination of structural provisions, changes, or adjustments to properties and structures subject to flooding primarily for the reduction or elimination of flood damages to properties, water and sanitary facilities, structures, and contents of buildings in a flood hazard area.
- 11.11 Flood Protection Elevation - an elevation one foot above the elevation or "flood profile" of the 100-year flood under existing channel and floodplain conditions. It is one foot above the elevation of the flood for the Flood Regulatory District, as shown on the Floodplain maps in the office of the Urban Drainage and Flood Control District.
- 11.12 Hundred-year Flood – is one that has a frequency of occurrence of hundred (100) years determined from an analysis of floods on a particular watercourse and other

watercourses in the same general region. It has about an one percent chance of occurring in any given year.

- 11.13 Obstruction – sandbars formed by the natural flow of a watercourse, temporary structures, planks, snags and debris in and along an existing channel which cause a flood hazard.
- 11.14 Reach – a hydraulic engineering term to describe longitudinal segments of a stream or river. A reach will generally include the segment of the floodplain where flood heights are primarily controlled by manmade or natural floodplain obstructions or restrictions. In an urban area, the segment of a stream or river between two consecutive bridge crossings would most likely be a reach.
- 11.145 Occupancy – the use or possession of a building by humans for purposes including, but not limited to, residential, office, hospital or commercial.
- 11.15 Shallow Flooding Area – an area of shallow indeterminate flooding not related to the flood profile.
- 11.16 Storage Capacity of a Floodplain – the volume of space above an area of floodplain land that can be occupied by flood water of a given stage at a given time, regardless of whether the water is moving. Storage capacity tends to reduce downstream flood peaks.
- 11.17 Structure – anything constructed or erected, the use of which required a more or less permanent location on or in the ground. Includes, but is not limited to, objects such as buildings, factories, sheds, and cabins.
- 11.18 Structure, Permanent – a structure which is built of such materials and in such a way that it would commonly be expected to last and remain useful for a substantial period of time.
- 11.19 Structure, Temporary – a structure which is built of such materials and in such a way that it would commonly be expected to have a relatively short useful life, or is built for a purpose that would commonly be expected to be relatively short-term.
- 11.20 Substantial Improvement – any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50 percent of the actual cash value of the structure either (a) before the improvement has started, or (b) if the structure has been damaged and is being restored, before the damage occurred. Substantial improvement is started when the first alteration of any structural part of the building commences.
- 11.21 Watercourse – a channel, natural depression, slough, artificial channel, gulch, arroyo, stream, creek, pond, reservoir, or lake in which storm runoff and flood water flows either regularly or infrequently. This includes major drainageways for carrying urban storm runoff.
- 11.22 Floodplain Administrator – that individual appointed by the Board of Directors to administer the provisions of these Regulations.

- 11.23 Floodplain Board of Adjustment – the seven (7) member board appointed by the Board of Directors who determine the granting of variances and review decisions of the Floodplain Administrator.
- 11.24 Floodplain Maps – those maps that accurately indicate the boundaries of the Flood Regulatory District.