

**LLANO COUNTY**

**FLOOD DAMAGE PREVENTION ORDER**

**ARTICLE I**

**STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE AND METHODS**

**SECTION A. STATUTORY AUTHORIZATION**

The Legislature of the State of Texas has in (statutes) Texas Water Code Sec 16.315 delegated the responsibility of local governmental units to adopt regulations designed to minimize flood losses and promote the public health, safety and general welfare of its citizenry. Therefore, the Commissioners Court of Llano County, Texas, does ordain as follows: "REGULATIONS FOR FLOOD PLAIN MANAGEMENT"

**SECTION B. FINDINGS OF FACT**

- (1) The flood hazard areas of Llano County are subject to periodic inundation, which results in loss of life and property, health and safety hazards, disruption of commerce and governmental services, and extraordinary public expenditures for flood protection and relief, all of which adversely affect the public health, safety and general welfare.
- (2) These flood losses are created by the cumulative effect of obstructions in floodplains which cause an increase in flood heights and velocities, and by the occupancy of flood hazard areas by uses vulnerable to floods and hazardous to other lands because they are inadequately elevated, floodproofed or otherwise protected from flood damage.
- (3) Special flood hazard areas (SFHA) in Llano County are identified on the Flood Insurance Rate Maps (FIRMs) and the accompanying Flood Insurance Study (FIS) published by the Federal Emergency Management Agency (FEMA).
- (4) The term floodplain has broader scope than the special flood hazard areas (SFHAs) and refers to any land which is subject to periodic inundation. Floodplains are important to Llano County because they convey and store flood waters; they contribute to the better water quality and water supply; they provide habitat for fish, game and wildlife; they provide open space for leisure and recreational activities; and they have productive soils for agriculture and timber. Floodplains, by nature, change over time due to natural processes and from human development.

**SECTION C. STATEMENT OF PURPOSE**

It is the purpose of this order to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific areas, and to maintain healthy and functional floodplains by provisions designed to:

(1) Protect human life and health;

(2) Minimize expenditure of public money for costly flood control projects;

(3) Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;

(4) Minimize prolonged business interruptions;

(5) Minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in floodplains;

(6) Help maintain a stable tax base by providing for the sound use and development of flood-prone areas in such a manner as to minimize future flood blight areas; and

(7) Insure that potential buyers are notified that property is in a flood area.

**SECTION D. METHODS OF REDUCING FLOOD LOSSES**

In order to accomplish its purposes, this order uses the following methods:

(1) Restrict or prohibit uses that are dangerous to health, safety or property in times of flood, or cause excessive increases in flood heights or velocities;

(2) Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

(3) Control the alteration of natural floodplains, stream channels, and natural protective barriers, which are involved in the accommodation of flood waters;

(4) Control filling, grading, dredging and other development which may increase flood damage;

(5) Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards to other lands.

## ARTICLE 2

### DEFINITIONS

Unless specifically defined below, words or phrases used in this order shall be interpreted to give them the meaning they have in common usage and to give this order it's most reasonable application.

**A ZONE** – See AREA OF SHALLOW FLOODING and AREA OF SPECIAL FLOOD HAZARD.

**ACCESSORY STRUCTURE** - means a structure which is on the same parcel of property as the principal structure and the use of which is incidental and subordinate to the use of the principal structure. This includes but is not limited to a detached garage, storage shed, gazebo, picnic pavilion, boathouse, barn or other similar building.

**ADDITION** - is an improvement that increases the square footage of a structure including lateral additions added to the side or rear of a structure, vertical additions added on top of a structure, and enclosures added underneath a structure. Related to SUBSTANTIAL IMPROVEMENT. (See Footprint)

**ALLUVIAL FAN FLOODING** - means flooding occurring on the surface of an alluvial fan or similar landform which originates at the apex and is characterized by high-velocity flows; active processes of erosion, sediment transport, and deposition; and unpredictable flow paths. Alluvial fan flooding is depicted on a Flood Insurance Rate Map (FIRM) as Zone AO, with a flood depth and velocity.

**APEX** - means a point on an alluvial fan or similar landform below which the flow path of the major stream that formed the fan becomes unpredictable and alluvial fan flooding can occur.

**AREA OF SHALLOW FLOODING** - means a designated AO, AH, or VO zone 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. Such flooding is characterized by ponding or sheet flow.

**AREA OF SPECIAL FLOOD HAZARD** - is the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. The area may be designated as Zone A on the Flood Hazard Boundary Map (FHBM). After detailed ratemaking has been completed in preparation for publication of the FIRM, Zone A usually is refined into Zones A, AE, AH, AO, A1-99, VO, V1-30, VE or V.

**BASE FLOOD** - means the flood having a one percent chance of being equaled or exceeded in any given year.

**BFE - BASE FLOOD ELEVATION-FREEBOARD**

**BASE FLOOD ELEVATION (BFE)** - is the computed elevation to which floodwater is anticipated to rise during the base flood which are shown on Flood Insurance Rate Maps (FIRMs) and on the flood profiles in the Flood Insurance Study (FIS) for Zones A, AE, AH, A1-A30, AR, V1-V30, or VE. The BFE is the regulatory requirement for the elevation or floodproofing of structures. The relationship between the BFE and a structure's elevation determines the flood insurance premium. Llano County requires development in the floodplain to be one foot above the BFE(Freeboard).

**BASEMENT** - means any area of the building having its floor subgrade (below ground level) on all sides.

**CERTIFICATE OF COMPLIANCE**

Required of the Floodplain Administrator to issue subject to all conditions of the floodplain permit having been met upon completion of the project.

**CLOMR CONDITIONAL LETTER OF MAP REVISION**

is 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 effective Base Flood Elevations (BFE's), or the Special Flood Hazard Area (SFHA).

**COMMUNITY PANEL - A panel to hear appeals of floodplain decisions and variance requests.**

**CRITICAL FEATURE** - means an integral and readily identifiable part of a flood protection system, without which the flood protection provided by the entire system would be compromised.

**DEVELOPMENT** - means any man-made change in improved and unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations or storage of equipment or materials.

**ELEVATED BUILDING** - means a nonbasement building (i) built, in the case of a building in Zones A1-30, AE, A, A99, AO, AH, B, C, X, and D, to have the top of the elevated floor, or in the case of a building in Zones V1-30, VE, or V, to have the bottom of the lowest horizontal structure member of the elevated floor elevated above the ground level by means of pilings, columns (posts and piers), or shear walls parallel to the floor of the water and (ii) adequately anchored so as not to impair the structural integrity of the building during a flood of up to the magnitude of the base flood. In the case of Zones A1-30, AE, A, A99, AO, AH, B, C, X, and D, "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. In the case of Zones V1-30, VE, or V, "elevated building" also includes a building otherwise meeting the definition of "elevated building," even though the lower area is enclosed by means of breakaway walls if the breakaway walls met the standards of Section 60.3(e)(5) of the National Flood Insurance Program regulations.

**ELEVATION REFERENCE MARK** – see REFERENCE MARK

**ENCLOSURE** - Enclosures are enclosed walled in areas below the lowest floor of an elevated building. (includes crawlspaces).

**ENCROACHMENT** - means the advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures or development into a regulatory floodplain which may impede or alter its flow capacity.

**EROSION** means the process of the gradual wearing away of land masses.

**EXISTING CONSTRUCTION** - means for the purposes of determining rates, structures for which the "start of construction" commenced before the effective date of the FIRM, September 18, 1991. "Existing construction" may also be referred to as "existing structures."

**EXISTING MANUFACTURED HOME/RV PARK OR SUBDIVISION** - means a manufactured home or RV park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes or RV's 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.

**EXPANSION TO AN EXISTING MANUFACTURED HOME/RV PARK OR SUBDIVISION** - means the preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes or RV's are to be affixed (including the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads).

**FLOOD OR FLOODING** - means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- (1) the overflow of inland or tidal waters.
- (2) the unusual and rapid accumulation or runoff of surface waters from any source.
- (3) mudslides (i.e., mudflows) which are proximately caused by flooding and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth

is carried by a current of water and deposited along the path of the current.

**FLOOD ELEVATION STUDY** – means an examination, evaluation and determination of flood hazards and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of mudslide (i.e., mudflow) and/or flood-related erosion hazards.

**FLOOD HAZARD BOUNDARY MAP (FHBM)** - means an official map of a community, issued by the Administrator, where the boundaries of the flood, mudslide (i.e., mudflow) related erosion areas having special hazards have been designated as Zones A, M, and/or E.

**FLOOD INSURANCE RATE MAP (FIRM)** - means an official map of a community, on which the Federal Emergency Management Agency has delineated both the special flood hazard areas and the risk premium zones applicable to the community.

**FLOOD INSURANCE STUDY (FIS)** – means official report provided by the Federal Emergency Management Agency that examines, evaluates and determines the flood hazards and, if appropriate, corresponding flood profiles and water surface elevations. It can also be the examination, evaluation, and determination of mudslide and/or flood-related erosion hazards.

**FLOODPLAIN OR FLOOD-PRONE AREA** - means any land area susceptible to being inundated by water from any source (see definition of flooding).

**FLOODPLAIN ADMININSTRATOR**

Shall administer and implement the provisions of this order and other appropriate sections of 44 CFR (National Flood Insurance Program Regulations) pertaining to floodplain management as directed by Commissioners Court.

**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 management regulations.

**FLOODPLAIN MANAGEMENT REGULATIONS** - means this ordinance, zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading ordinance and erosion control ordinance) and other applications of police power which apply to the development and land use in flood-prone areas. The term describes such federal, state or local regulations, in any combination thereof, which provide standards

for the purpose of floodplain management.

**FLOODPROOFING** - means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents. Also see WET FLOODPROOFING. Refer to FEMA Technical Bulletins TB 1-93, TB 3-93, and TB 7-93 for guidelines on dry and wet floodproofing.

**FLOOD-RELATED EROSION AREA** or **FLOOD-RELATED EROSION PRONE AREA** - means a land area adjoining the shore of a lake or other body of water, which due to the composition of the shoreline or bank and high water levels or wind-driven currents, is likely to suffer flood-related erosion damage. Also see "Special flood-related erosion hazard area"

**FLOOD-RESISTANT** - is any building material capable of withstanding direct and prolonged contact with floodwaters for at least 72 hours without sustaining any damage requiring more than low-cost cosmetic repair (such as painting). Refer to FEMA Technical Bulletin 2-93, "Flood-Resistant Materials Requirements for Buildings Located in the Special Flood Hazard Areas in accordance with the National Flood Insurance Program."

**FREEBOARD** - means a factor of safety usually expressed in feet above a flood level for purposes of flood plain management. ``Freeboard'' tends to compensate for the many unknown factors that could contribute to flood heights greater than the height calculated for a selected size flood and floodway conditions, such as wave action, bridge openings, and the hydrological effect of urbanization of the watershed.

**FLOOD PROTECTION SYSTEM** - means those physical structural works for which funds have been authorized, appropriated, and expended and which have been constructed specifically to modify flooding in order to reduce the extent of the areas within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes hurricane tidal barriers, dams, reservoirs, levees or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

**FLOOD PROOFING** - means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

**FLOODWAY (REGULATORY FLOODWAY)(LLANO COUNTY DOES NOT HAVE A REGULATORY FLOODWAY)** - means the channel of a river or other

watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

**FOOTPRINT**

Means the exterior dimensions of a structure to include porches and any exterior addition to the main building that is attached.

**FUNCTIONALLY DEPENDENT USE** - means a use which cannot perform its intended purpose unless it is located or carried out in close proximity to water. The term includes only docking facilities, port facilities that are necessary for the loading and unloading of cargo or passengers, and ship building and ship repair facilities, but does not include long-term storage or related manufacturing facilities.

**FUTURE CONDITIONS HYDROLOGY** - means the flood discharges associated with projected land-use conditions based on a community's zoning maps and/or comprehensive land-use plans and without consideration of projected future construction of flood detention structures or projected future hydraulic modifications within a stream or other waterway, such as bridge and culvert construction, fill, and excavation.

**GOVERNING BODY** - is the local governing unit, i.e. county or municipality that is empowered to adopt and implement regulations to provide for the public health, safety and general welfare of its citizenry.

**HIGHEST ADJACENT GRADE** - means the highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

**HIGHWAY READY** - with respect to a recreational vehicle, means 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.

**HISTORIC STRUCTURE** - means any structure that is:

(a) Listed individually in the National Register of Historic Places (a listing maintained by the Department of Interior) or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;

(b) Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;

(c) Individually listed on a state inventory of historic places

in states with historic preservation programs which have been approved by the Secretary of Interior; or

(d) Individually listed on a local inventory or historic places in communities with historic preservation programs that have been certified either:

(1) By an approved state program as determined by the Secretary of the Interior or;

(2) Directly by the Secretary of the Interior in states without approved programs.

**HYDRODYNAMIC FORCES** - are imposed on an object, such as a building, by water flowing against and around it. Among the forces are positive frontal pressure against the structure, drag effect along the sides, and negative pressure in the downstream side.

**HYDROSTATIC FORCES** - Standing water or slowly moving water can induce horizontal hydrostatic forces against a structure, especially when floodwater levels on different sides of a wall are not equal. Also flooding can cause vertical hydrostatic forces, or flotation.

**LETTER OF MAP CHANGE (LOMC)** - is a general term used to refer to the several types of revisions and amendments to FEMA maps that can be accomplished by letter. They include Letter of Map Amendment (LOMA), Letter of Map Revision (LOMR), and Letter of Map Revision based on Fill (LOMR-F).

**LEVEE** - means a man-made structure, usually an earthen embankment, 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.

**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.

**LIMITED STORAGE** - is the type of storage permitted in an enclosed area below the base flood elevation and is limited to that which is incidental and accessory to the principal use of the structure. For example, if the structure is a residence, storage should be limited to items such as lawn and garden equipment, snow tires, and other low damage items which will not suffer flood damage or can be conveniently moved to the elevated part of the building.

**LOWEST FLOOR** - means the lowest floor of the lowest enclosed area (including basement). An unfinished or flood resistant enclosure, usable solely for parking or vehicles, building access or storage in an area other than a basement area is not considered a 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 requirement of Section 60.3 of the National Flood Insurance Program regulations.

**LOWEST HORIZONTAL STRUCTURAL MEMBER** - in an elevated building, is the lowest beam, joist, or other horizontal member that supports the building. Grade beams installed to support vertical foundation members where they enter the ground are not considered lowest horizontal members.

**MANUFACTURED HOME** - means a structure transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when connected to the required utilities. The term "manufactured home" does not include a "recreational vehicle" until the recreational vehicle becomes a permanent structure(see Recreational Vehicle).

**MANUFACTURED HOME/RV PARK OR SUBDIVISION** - means a parcel (or contiguous parcels) of land divided into two or more lots or spaces for rent or sale.

**MEAN SEA LEVEL** - means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum of 1988 (NAVD 88), or other datum, to which base flood elevations shown on a community's Flood Insurance Rate Map are referenced.

**MUDSLIDE** (i.e., mudflow) - describes a condition where there is a river, flow or inundation of liquid mud down a hillside usually as a result of a dual condition of loss of brush cover, and the subsequent accumulation of water on the ground preceded by a period of unusually heavy or sustained rain. A mudslide (i.e., mudflow) may occur as a distinct phenomenon while a landslide is in progress, and will be recognized as such by the Administrator only if the mudflow, and not the landslide, is the proximate cause of damage that occurs.

**NATIONAL FLOOD INSURANCE PROGRAM (NFIP)** - is a Federal program enabling property owners in participating communities to purchase insurance as a protection against flood losses in exchange for State and community floodplain management regulations that reduce future flood damages. Participation in the NFIP is based on an agreement between communities and the Federal Government. If a community adopts and enforces a floodplain management ordinance to reduce future flood risk to new construction in floodplains, the Federal Government will make flood insurance available within the community as a financial protection against flood losses. This insurance is designed to provide an insurance alternative to disaster assistance to reduce the escalating costs of repairing damage to buildings and their contents caused by floods. The U.S.

Congress established the National Flood Insurance Program (NFIP) with the passage of the National Flood Insurance Act of 1968.

**NEW CONSTRUCTION** - For floodplain management purposes, means structures for which the start of construction commenced on or after the effective date of a floodplain management regulation adopted by a community and includes any subsequent improvements to such structures.

**NEW MANUFACTURED HOME/RV PARK OR SUBDIVISION** - means a manufactured home or RV park or subdivision for which the construction of facilities for servicing the lots/spaces on which the manufactured homes or RV's 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.

**ONE-PERCENT-ANNUAL-CHANCE FLOOD** - see BASE FLOOD

**ONE-HUNDRED-YEAR FLOOD or 100-YEAR FLOOD** - see BASE FLOOD

**RECREATIONAL VEHICLE** - means a vehicle which is (i) built on a single chassis; (ii) 400 square feet or less when measured at the largest horizontal projections; (iii) designed to be self-propelled or permanently towable by a light duty truck; and (iv) designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use. May not permanently attached any additions or remain at same location for more than 180 days or be tied to permanent septic, water, or electricity.

**REFERNCE MARK** - means a point of vertical ground elevation reference to be shown on the FIRM for comparison to the BFE. ERMS shall be referenced to the National Geodetic Vertical Datum (NGVD) or the North American Vertical Datum (NAVD).

**SPECIAL FLOOD HAZARD AREA**

The land area covered by the floodwaters of the base flood is the Special Flood Hazard Area (SFHA) on NFIP maps. The SFHA is the area where the NFIP's floodplain management regulations must be enforced. The SFHA includes Zones A, AO, AH, A1-30, AE, A99, AR, AR/A1-30, AR/AE, AR/AO, AR/AH, AR/A, VO, V1-30, VE, and V.

**START OF CONSTRUCTION** - Includes new construction and substantial improvement and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement 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, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond the stage of excavation; or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling; nor does it include the installation of streets and/or walkways; nor does it include excavation for basement, footings, piers or foundations or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units 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 or not that alteration affects the external dimensions of the building.

**STRUCTURE** - means a walled and roofed building, including a gas or liquid storage tank that is principally above ground, as well as a manufactured home.

**SUBSTANTIAL DAMAGE** - means damage of any origin sustained by a structure whereby the cost of restoring the structure to it's before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**SUBSTANTIAL IMPROVEMENT** - means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before "start of construction" of the improvement. Structures built prior to September 18, 1991(pre-firm) are grandfathered to their existing status and may be substantially improved not to exceed 50% of the current improvement(structure only) appraised value and do not need to meet current elevation and other flood plain standards. However, the existing exterior footprint of the structure may not be changed. Other conditions regarding electrical, plumbing and safety measures may be required of pre-firm structures. This includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either: (1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary conditions or (2) Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure."

**VARIANCE** - is a grant of relief to a person from the requirement of this order when specific enforcement would result in unnecessary hardship. A variance, therefore, permits construction or development in a manner otherwise prohibited by this order. (For full requirements see Section 60.6 of the National Flood Insurance

Program regulations.)

**VIOLATION** - means the failure of a structure or other development to be fully compliant with the community's floodplain management regulations. A structure or other development without the elevation certificate, other certifications, or other evidence of compliance required in this order is presumed to be in violation until such time as that documentation is provided.

**WATERCOURSE** - A definite channel with bed and banks within which concentrated water flows continuously, frequently or infrequently.

**WATER SURFACE ELEVATION** - means the height, in relation to the National Geodetic Vertical Datum of 1929 (NGVD 29), North American Vertical Datum of 1988 (NSVD 88), or other datum, where specified, of floods of various magnitudes and frequencies in the floodplains of coastal or riverine areas.

**WET FLOODPROOFING** - includes permanent or contingent measures applied to a structure or its contents that prevent or provides resistance to damage from flooding while allowing floodwaters to enter the structure or area.

### **ARTICLE 3**

#### **GENERAL PROVISIONS**

##### **SECTION A. LANDS TO WHICH THIS ORDER APPLIES**

The order shall apply to all areas of special flood hazard with the jurisdiction of LLANO COUNTY.

##### **SECTION B. BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD**

The areas of special flood hazard identified by the Federal Emergency Management Agency in a scientific and engineering report entitled, "The Flood Insurance Study for Llano county," dated September 18, 1991, with accompanying Flood Insurance Rate Maps and Flood Boundary-Floodway Maps (FIRM and FBFM) and any revisions thereto are hereby adopted by reference and declared to be a part of this order.

##### **SECTION C. ESTABLISHMENT OF DEVELOPMENT PERMIT**

A Development Permit shall be required to ensure conformance with the provisions of this order. Any development in the County established floodplain will require a permit. All structures to be constructed, moved on to property, or planning substantial

improvement(remodeling) shall require a permit. A physical address will not be assigned to the property before a permit is issued for a structure on that property.

**SECTION D. COMPLIANCE**

No structure or land shall hereafter be located, altered, or have its use changed without full compliance with the terms of this order and other applicable regulations.

**SECTION E. ABROGATION AND GREATER RESTRICTIONS**

This order is not intended to repeal, abrogate, or impair any existing easements, covenants, or deed restrictions. However, where this order and another order, easement, covenant, or deed restriction conflict or overlap, whichever imposes the more stringent restrictions shall prevail.

**SECTION F. INTERPRETATION**

In the interpretation and application of this order, all provisions shall be; (1) considered as minimum requirements; (2) liberally construed in favor of the governing body; and (3) deemed neither to limit nor repeal any other powers granted under State statutes.

**SECTION G. WARNING AND DISCLAIMER OR LIABILITY**

The degree of flood protection required by this order is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. On rare occasions greater floods can and will occur and flood heights may be increased by man-made or natural causes. This order does not imply that land outside the areas of special flood hazards or uses permitted within such areas will be free from flooding or flood damages. This order shall not create liability on the part of the community or any official or employee thereof for any flood damages that result from reliance on this order or any administrative decision lawfully made thereunder.

**SECTION H. SEVERABILITY.**

This ordinance and the various parts thereof are hereby declared to be severable. Should any section of this ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the ordinance as a whole, or any portion thereof other than the section so declared to be unconstitutional

or invalid.

## **ARTICLE 4**

### **ADMINISTRATION**

#### **SECTION A. DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR**

The Department of Environmental and Emergency Services Administrator is hereby appointed the Floodplain Administrator to administer and implement the provisions of this order and other appropriate sections of 44 CFR (National Flood Insurance Program Regulations) pertaining to floodplain management as directed by Commissioners Court.

#### **SECTION B. DUTIES & RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR**

Duties and responsibilities of the Floodplain Administrator shall include, but not be limited to, the following:

- (1) Maintain and hold open for public inspection all records pertaining to the provisions of this order.
- (2) Review permit application to determine whether proposed building site, including the placement of manufactured homes, including RV's, will be reasonably safe from flooding.
  - (a) : ensure that development in flood prone areas in no way would adversely impact other properties;
- (3) Review, approve or deny all applications for development permits required by adoption of this order using the approved application forms and site plan.
- (4) Review permits for proposed development to assure that all necessary permits have been obtained from those Federal, State or local governmental agencies (including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334) from which prior approval is required.
- (5) Where interpretation is needed as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions) the Floodplain Administrator shall make the necessary interpretation. If a structure or any development is to take place adjacent to a river, creek, stream or drainage area that is not identified to be in the mapped floodplain the FPA may require a floodplain permit to include an Elevation Certificate.

(6) Notify, in riverine situations, adjacent communities and the State Coordinating Agency which is TDWB, prior to any alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency.

(7) Assure that the flood carrying capacity within the altered or relocated portion of any watercourse is maintained.

(8) When base flood elevation data has not been provided in accordance with Article 3, Section B, the Floodplain Administrator shall obtain, review and reasonably utilize any base flood elevation data and floodway data available from a Federal, State or other source, in order to administer the provisions of Article 5. In A Zones where documented high water marks have been recorded the FPA may allow three feet to be added to establish a required elevation.

(9) A regulatory floodway has not been designated in Llano County, therefore, the Floodplain Administrator must require that 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 foot at any point within the community. The FPA may require at anytime a CLOMR- Conditional Letter of Map Revision, and/or a detailed engineering study.

(10) Under the provisions of 44 CFR Chapter 1, Section 65.12, of the National Flood Insurance Program regulations, a community may approve certain development in Zones A1-30, AE, AH, on the community's FIRM which increases the water surface elevation of the base flood by more than one foot, provided that the community **first** applies for a conditional FIRM revision through FEMA.

(11) An affidavit must be filed with the County Clerk's office when a permit is issued for a structure in the floodplain that has a lower level below the Base Flood Elevation and is restricted to parking storage or access. The affidavit shall describe the legal description, physical address and restrictions placed on the structure.

(12) A Certificate of Compliance for all new structures and pre-firm structures renovated with a lower level below the Base Flood Elevation shall be issued by the Floodplain Administrator subject to all conditions of the floodplain permit having been met upon completion of the project. Final Elevation Certificate, letter of confirmation from the owner and any other requirements of the permit must be received first.

**SECTION C. PERMIT PROCEDURES**

(1) Application for a Development Permit in the floodplain shall be presented to the Floodplain Administrator on forms furnished by him/her and may include, but not be limited to: Site plan, drawn to scale, which include but is not limited to:

- i. Location and dimensions of all existing and proposed structures, including manufactured homes and recreational vehicles;
  - ii. ground elevations at building corners of proposed new and substantially improved structures;
  - iii. location, dimensions and elevation of proposed landscape and terrain alterations,
  - iv. proposed locations of water supply, sanitary sewer, and utilities;
  - v. the location of the special flood hazard area; and
  - vi. if available, the base flood elevation from the Flood Insurance Study.
- (b) Building plans, if applicable, drawn to scale, which include but are not limited to:
- i. elevation in relation to mean sea level of the lowest floor (including basement) of all existing and proposed new and substantially improved structures that must be one foot above BFE;
  - ii. for a crawl-space foundation, location and total net area of foundation openings (see FEMA Technical Bulletins 1-93 and 7-93);
  - iii. for foundations placed on fill, the location and height of fill, and compaction to be achieved (compacted to a minimum of 95 percent using the Standard Proctor Test method);
  - iv. proposed elevation in relation to mean sea level to which any nonresidential structure will be floodproofed, (see FEMA Technical Bulletin TB 3-93); and
- (c) if applicable, a certificate from a registered professional engineer that the nonresidential floodproofed structure shall meet the floodproofing criteria of Article 5, Section B (2); and

(d) a description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.

e. Maintain a record of all such information in accordance with Article 4, Section (B)(1).

(2) Approval or denial of a Development Permit by the Floodplain Administrator shall be based on all of the provisions of this order and the following relevant factors:

a. The danger to life and property due to flooding or erosion damage;

b. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

c. The danger that materials may be swept onto other lands to the injury of others;

d. The compatibility of the proposed use with existing and anticipated development;

e. The safety of access to the property in times of flood for ordinary and emergency vehicles;

f. The costs of providing governmental services during and after flood conditions including maintenance and repair of streets and bridges, and public utilities and facilities such as sewer, gas, electrical and water systems;

g. 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;

h. The necessity to the facility of a waterfront location, where applicable;

i. The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;

j. The relationship of the proposed use to the comprehensive plan for that area.

k. A person may not divert or impound the natural flow of surface waters in this state, or permit a diversion or impounding by him to continue, in a manner that damages the property of another by the overflow of the water diverted or impounded.

(TWC 11.086)

#### **SECTION D. VARIANCE PROCEDURES**

(1) The **COMMUNITY PANEL** as established by the community shall hear and render judgement on requests for variances from the requirements of this order.

(2) The **COMMUNITY PANEL** shall hear and render judgement on an appeal only when it is alleged there is an error in any requirement, decision, or determination made by the Floodplain Administrator in the enforcement or administration of this order.

(3) Any person or persons aggrieved by the decision of the **COMMUNITY PANEL** may appeal such decision in the courts of competent jurisdiction.

(4) The Floodplain Administrator shall maintain a record of all actions involving an appeal and shall report variances to the Federal Emergency Management Agency upon request.

(5) Variances may be issued for the reconstruction, rehabilitation or restoration of structures listed on the National Register of Historic Places or the State Inventory of Historic Places, without regard to the procedures set forth in the remainder of this order.

(6) Variances may be issued for new construction and substantial improvements to be erected on a lot of one-half acre or less in size contiguous to and surrounded by lots with existing structures constructed below the base flood level, providing the relevant factors in Section C(2) of this Article have been fully considered. As the lot size increases beyond the one-half acre, the technical justification required for issuing the variance increases.

(7) Upon consideration of the factors noted above and the intent of this order, the **COMMUNITY PANEL** may attach such conditions to the granting of variances as it deems necessary to further the purpose and objectives of this order (Article 1, Section C).

(8) Variances shall not be issued within any designated flood zone if any increase in flood levels during the base flood discharge would result.

(9) 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.

(10) Prerequisites for granting variances:

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

b. 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, 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 orders. The **COMMUNITY PANEL** Appeals Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this ordinance, and the

- i. danger that materials may be swept onto other lands to the injury of others;
- ii. danger of life and property due to flooding or erosion damage;
- iii. susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the existing individual owner and future owners of the property;
- iv. importance of the services provided by the proposed facility to the community;
- v. necessity to the facility of a waterfront location, where applicable;
- vi. availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

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

(10) Variances may be issued by a community for new construction and substantial improvements and for other development necessary for the conduct of a functionally dependent use provided that (i) the criteria outlined in Article 4, Section D(1)-(9) are met, and (ii) the structure or other development is protected by methods that minimize flood damages during the base flood and create no additional threats to public safety.

(11) Under some circumstances it may be appropriate to wet-floodproof certain types of agricultural structures when located in wide, expansive floodplains through issuance of a variance. This should only be done for structures used for temporary storage of equipment or crops or temporary shelter for livestock and only in circumstances where it can be demonstrated that agricultural structures can be designed in such a manner that results in minimal damage to the structure and its contents and will create no additional threats to public safety.

**ARTICLE 5**

**PROVISIONS FOR FLOOD HAZARD REDUCTION**

**SECTION A. GENERAL STANDARDS**

In all areas of special flood hazards the following provisions are required for all new construction and substantial improvements.

(1) 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;

(2) All new construction or substantial improvements shall be constructed by methods and practices that minimize flood damage;

(3) All new construction or substantial improvements shall be constructed with materials resistant to flood damage;

(4) 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.

(5) All new and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the system;

(6) New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from the systems into flood waters; and,

(7) On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.

**SECTION B. SPECIFIC STANDARDS**

In all areas of special flood hazards where base flood elevation data has been provided as set forth in (i) Article 3, Section B, (ii) Article 4, Section B(8), or (iii) Article 5, Section C(3), the

following provisions are required:

(1) **Residential Construction** - new construction and substantial improvement of any residential structure shall have the lowest floor (including basement), elevated to or above the base flood elevation. A registered professional engineer, architect, or land surveyor shall submit a certification to the Floodplain Administrator that the standard of this subsection as proposed in Article 4, Section C(1)a., is satisfied.

(2) **Nonresidential Construction** - new construction and substantial improvements of any commercial, industrial or other nonresidential structure shall either have the lowest floor (including basement) elevated to or above the base flood level or together with attendant utility and sanitary facilities, be designed so that below the base flood level 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 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 as outlined in this subsection. A record of such certification which includes the specific elevation (in relation to mean sea level) to which such structures are floodproofed shall be maintained by the Floodplain Administrator.

(3) **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. Designs for meeting this requirement must either be certified by a registered professional engineer or architect or meet or exceed the following minimum criteria:

a. A minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided.

b. The bottom of all openings shall be no higher than one foot above grade.

c. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(4) **Manufactured Homes** -

a. Require that all manufactured homes to be placed within Zone A on a community's FHBM or FIRM shall be installed using methods and practices which minimize flood damage. For the

purposes of 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 forces.

b. Require that manufactured homes that are placed or substantially improved within Zones A1-30, AH, and AE 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, be elevated on a permanent foundation such that the lowest floor of the manufactured home is elevated to or above the base flood elevation and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

c. Require that manufactured homes be placed or substantially improved on sites in an existing manufactured home park or subdivision with Zones A1-30, AH and AE on the community's FIRM that are not subject to the provisions of paragraph (4) of this section be elevated so that either:

(i) the lowest floor of the manufactured home is at or 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 36 inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.

- (4) **Recreational Vehicles** - Require that recreational vehicles placed on sites within Zones A1-30, AH, and AE on the community's FIRM either (i) be on the site for fewer than 180 consecutive days, (ii) be fully licensed and ready for highway use, or (iii) meet the permit requirements of Article 4, Section C(1), and the elevation and anchoring requirements for "manufactured homes" in paragraph (4) of this section. 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. If neither of their conditions can be achieved, it is considered to be a manufactured home and is subject

to the requirements of Article 4, Section C (1).

- (5) **Utilities** - If a proposed building site is in an Special Flood Hazard Area (SFHA), the building support utility systems for all new construction and substantial improvements shall:
- i. 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;
  - ii. Require within flood-prone areas new and replacement water supply systems to be designed to minimize or eliminate infiltration of flood waters into the systems;
  - iii. Require within flood-prone areas new and replacement sewage systems be designed to minimize or eliminate infiltration of floodwaters into the systems and discharges from the systems into flood waters; and
  - iv. Require onsite water disposal systems be located to avoid impairment to them or contamination from them during flooding.

### **SECTION C. STANDARDS FOR SUBDIVISION PROPOSALS**

(1) All subdivision proposals including the placement of manufactured home-recreational vehicle parks and subdivisions shall be consistent with Article 1, Sections B, C, and D of this order.

(2) All proposals for the development of subdivisions including the placement of manufactured home-recreational vehicle parks and subdivisions shall meet Development Permit requirements of Article 3, Section C; Article 4, Section C; and the provisions of Article 5 of this order.

(3) Base flood elevation data shall be generated for subdivision proposals and other proposed development including the

placement of manufactured home-recreational vehicle parks and subdivisions which is greater than 50 lots or 5 acres, whichever is lesser, if not otherwise provided pursuant to Article 3, Section B or Article 4, Section B (8) of this order.

(4) All subdivision proposals including the placement of manufactured home-recreational vehicle parks and subdivisions shall have adequate drainage provided to reduce exposure to flood hazards.

(5) All subdivision proposals including the placement of manufactured home-recreational vehicle parks and subdivisions shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize or eliminate flood damage.

#### **SECTION D. STANDARDS FOR AREAS OF SHALLOW FLOODING (AO/AH ZONES)**

Located within the areas of special flood hazard established in Article 3, Section 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; therefore, the following provisions apply:

(1) All new construction and substantial improvements of **residential** structures have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified).

(2) All new construction and substantial improvements of **non-residential** structures;

(i) have the lowest floor (including basement) elevated above the highest adjacent grade at least as high as the depth number specified in feet on the community's FIRM (at least two feet if no depth number is specified), or;

(ii) together with attendant utility and sanitary facilities be designed so that below the base flood level 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 of effects of buoyancy.

(3) A registered professional engineer or architect shall submit a certification to the Floodplain Administrator that the standards of this Section, as proposed in Article 4, Section C (1)a., are satisfied.

(4) Require within Zones AH or AO adequate drainage paths around structures on slopes, to guide flood waters around and away from proposed structures.

#### **SECTION E CERTIFICATION**

It is hereby found and declared by LLANO COUNTY that severe flooding has occurred in the past within its jurisdiction and will certainly occur within the future; that flooding is likely to result in infliction of serious personal injury or death, and is likely to result in substantial injury or destruction of property within its jurisdiction; in order to effectively comply with minimum standards for coverage under the National Flood Insurance Program; and in order to effectively remedy the situation described herein, it is necessary that this order become effective immediately.

Therefore, an emergency is hereby declared to exist, and this order, being necessary for the immediate preservation of the public peace, health and safety, shall be in full force and effect from and after its passage and approval.

#### **SECTION F PENALTY CLAUSE**

In accordance with Section 59.2(b) of CFR 44, Chapter 1, of the National Flood Insurance Program (NFIP) regulation, to qualify for the sale of federally-subsidized flood insurance, a community must adopt floodplain management regulations that meet or exceed the minimum standards of Section 60. "These regulations must include effective enforcement provisions."

In accordance with Section 60.1(b) of CFR 44, Chapter 1, of the NFIP regulations, "These regulation must be legally-enforceable, applied uniformly throughout the community to all privately and publicly owned land within flood-prone (i.e. mudflow) or flood-related erosion areas, and the community must provide that the regulations take precedence over less restrictive conflicting local laws, orders, or codes.

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PENALTIES FOR NONCOMPLIANCE

No structure or land shall hereafter be constructed, located, extended, converted, or altered without full compliance with the terms of this order and other applicable regulations. Violation of the provisions of this order by failure to comply with any of its requirements (including violations of conditions and safeguards established in connection with conditions) shall constitute a Class C misdemeanor. Any person who violates this order or fails to comply with any of its requirements shall upon conviction thereof be fined not more than \$500 for each violation, and in addition shall pay all costs and expenses involved in the case. Each day of violation shall constitute a separate offense. Nothing herein contained shall prevent the Llano County from taking such other lawful action as is necessary to prevent or remedy any violation.

COMMUNITY PANEL

The Community Panel shall consist of 3 members and one alternate member, appointed by Commissioners Court, from the general public that have some knowledge of floodplains, but no personal or professional involvement. One member shall be the County Commissioner from the precinct where the issue arose. The third member shall be the Floodplain Administrator. An alternate member from the general public may serve as a substitute for the general public member as deemed necessary by the precinct’s commissioner.

The Community Panel shall meet only as required. The meeting will be called by affected Commissioner. The Commissioner will also serve as Chair.

Items to be heard by the Community Panel as provided for in the Llano County Flood Prevention Order Section D, (1,2) includes:

- Appeals
- Variances

The Community Panel considerations may include:

1. Rule that the Floodplain Administrator had made the correct decision as supported by approved policy or regulation.
2. Instruct DEES to file with the Justice of Peace for prosecution.
3. Refer back to DEES for further negotiation.
4. Refer to Commissioners Court for further determination.

Findings from each meeting shall be reported to Commissioners Court.

**APPROVED: by Commissioners Court January 11, 2010**

**PASSED: \_\_\_\_\_**  
**Wayne A. Brascom**  
**County Judge**

LLANO COUNTY FLOOD PLAIN COMPLAINT FLOW CHART APPENDIX B  
 (COMMUNITY PANEL)

