

2024 REVISIONS TO FLOODPLAIN REGULATIONS

12-01-001-0001 STATEMENT OF PURPOSE

It is the purpose of these regulations to promote the public health, safety and general welfare, and to minimize public and private losses due to flood conditions in the City of Flagstaff by provisions designed:

- A. To protect human life and health;
- B. To minimize flood damages and reduce the height and velocities which are caused by obstructions which restrict the capacity of the watercourses and floodways;
- C. To reduce the financial burden imposed on the community, its governmental units and its citizens;
- D. To assure retention of sufficient floodway area to convey the base flood;
- E. To enhance wildlife and recreation values where appropriate by preserving riparian vegetation along watercourses and floodplains;
- F. To minimize expenditure of public money for costly flood control projects;
- G. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- H. To minimize prolonged business interruptions;
- I. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets, and bridges located in SPECIAL FLOOD HAZARD AREAS;
- J. To help maintain a stable tax base by providing for the ~~second~~ SOUND use and development of SPECIAL FLOOD HAZARD AREAS so as to minimize future flood blight areas;
- K. To ~~insure~~ PROVIDE A FRAMEWORK that potential buyers are notified EDUCATED that property is in an area of Special FLOOD HAZARD AREA;
- L. To insure that those who occupy Special FLOOD HAZARD AREA assume responsibility for their actions; and
- M. To maintain eligibility for the National Flood Insurance Program and State and/or Federal Disaster Relief.

12-01-001-0001.01 STATUTORY AUTHORIZATION

~~A.R.S. § 48-3610, the Arizona State Legislature authorizes City of Flagstaff to adopt regulations in conformance with A.R.S. § 48-3603 designed to promote the public health, safety and general welfare of its citizenry.~~

IN A.R.S. § 48-3610, THE ARIZONA STATE LEGISLATURE ENABLED THE CITY TO ASSUME

THE POWERS AND DUTIES FOR FLOODPLAIN MANAGEMENT AND ADOPT REGULATIONS IN CONFORMANCE WITH A.R.S. § 48-3609 DESIGNED TO PROMOTE THE PUBLIC HEALTH, SAFETY, AND GENERAL WELFARE OF ITS CITIZENRY. THEREFORE, THE CITY COUNCIL OF FLAGSTAFF, ARIZONA, DOES ORDAIN AS FOLLOWS:

12-01-001-0001.2 FINDINGS OF FACT

A. The SPECIAL FLOOD HAZARD AREAS of the City of Flagstaff are subject to periodic inundation which may result in loss of life and property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief and impairment of the tax base, all of which adversely affect the public health, safety and general welfare.

B. These flood losses may be caused by the cumulative effect of obstructions in SPECIAL FLOOD HAZARD AREAS which increase flood heights and velocities and, when inadequately anchored, cause damage in other areas. Uses that are inadequately flood proofed, elevated or otherwise protected from flood damage, also contribute to the flood loss.

12-01-001-0002 METHODS OF REDUCING FLOOD LOSSES:

In order to accomplish its purpose, these regulations includes methods and provisions for:

A. Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or in flood heights or velocities;

B. Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

C. Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;

D. Controlling filling, grading, dredging, and other development which may increase flood damage; and

E. Preventing or regulating the construction of flood barriers which may unnaturally divert flood waters or which may increase flood hazards in other areas.

F. Controlling or regulating increased stormwater runoff caused by development within contributing watersheds of watercourses and floodplains.

12-01-001-0003 DEFINITIONS

Unless specifically defined below, words or phrases used in these regulations shall be interpreted so as to give them the meaning they have in common usage and to give these regulations their most reasonable application.

"Accessory Use" means a use which is incidental and subordinate to the principal use of the parcel of land on which it is applied.

"Accessory Structure" ~~means a structure that is solely for the parking of no more than 2 cars; or~~

~~limited storage (small, low cost sheds 200 sq. ft. or less).~~ FEMA PUBLICATION P-2140: FLOODPLAIN MANAGEMENT REQUIREMENTS FOR AGRICULTURAL STRUCTURES AND ACCESSORY STRUCTURES, DEFINES AN ACCESSORY STRUCTURE AS:

FOR FLOODPLAIN MANAGEMENT PURPOSES, ACCESSORY STRUCTURES ARE STRUCTURES THAT ARE ON THE SAME PARCEL OF PROPERTY AS A PRINCIPAL STRUCTURE, THE USE OF WHICH IS INCIDENTAL TO THE USE OF THE PRINCIPAL STRUCTURE. ACCESSORY STRUCTURES MUST BE USED FOR PARKING OR STORAGE, BE SMALL AND REPRESENT A MINIMAL INVESTMENT BY OWNERS, AND HAVE LOW DAMAGE POTENTIAL. FEMA CONSIDERS "SMALL" TO MEAN NOT LARGER THAN A ONE-STORY TWO-CAR GARAGE. EXAMPLES OF SMALL ACCESSORY STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO, DETACHED GARAGES, STORAGE AND TOOL SHEDS, AND SMALL BOATHOUSES.

- STRUCTURE SIZE - THE FOOTPRINT OF A TYPICAL TWO-CAR GARAGE IS ABOUT 600 SQUARE FEET IN AREA. OR LIMITED STORAGE (SMALL, LOW COST SHEDS 200 SQ. FT. OR LESS).
- STORAGE - CONTENTS STORED IN WET FLOODPROOFED STRUCTURES WILL GET WET DURING FLOODING.

"Addition" means any alteration to an existing structure which results in any extension or increase in the structure's floor area or height.

"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.

"Alteration" means any act or process that changes one or more of the existing features of a structure, including but not limited to, exterior changes or interior modifications of a structure or any of its architectural details or visual characteristics, including paint color, surface texture, and facade materials.

"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.

"Appeal" means a request for a review of the Floodplain Administrator's interpretation of any provision of these regulations.

"Architect" means a Registered Professional Architect in the State of Arizona.

"Area of Jurisdiction" means the lands within the municipal boundaries of the City of Flagstaff.

"Area of Shallow Flooding" means a designated AO or AH Zone on the Flood Insurance Rate Map, (FIRM) with a one percent or greater annual chance of flooding. The base flood depths range from one to three feet; a clearly defined channel does not exist; the path of flooding is unpredictable and indeterminate; and velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

~~"Area of Special Flood Hazard" means the land in the floodplain within a community subject to a one percent or greater chance of flooding in any given year. This area is designated as Zone A, AO, AH, AE, or A99 on the FIRM and other areas determined by the criteria adopted by the~~

~~Director of the Arizona Department of Water Resources. For the purposes of these regulations, the term "Special Flood Hazard Area" (SFHA) is synonymous in meaning with "area of special flood hazard".~~

"Base Flood" means the flood having a one percent chance of being equaled or exceeded in any given year. For the purposes of these regulations, the term "base flood" is synonymous in meaning with the "100-year flood".

~~"Base Flood Elevation (BFE)" means the elevation shown on the Flood Insurance Rate Map for Zones AH, V and VE that indicate the water surface elevation resulting from a flood that has a 1-percent or greater chance of being equaled or exceeded in any given year.~~

"Base Flood Elevation (BFE)" The computed elevation to which floodwater is anticipated to rise during the base flood.

"Breakaway Wall" means a wall that is not part of the structural support of a building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building supporting foundation system.

"Building" see "Structure".

~~"Chief Executive Officer of the Community (CEO)" means the official of the community who is charged with the authority to implement and administer laws, ordinances, and regulations for that community.~~

"Community" means any state or area or political subdivision thereof, or any Indian tribe or authorized tribal organization, ~~or Alaska Native village~~ or authorized native organization, which has authority to adopt and enforce floodplain management regulations for the areas within its jurisdiction.

"Critical Facilities" means structures or facilities that produce, use or store highly volatile, flammable, explosive, toxic, and/or water reactive materials; hospitals; nursing homes and housing likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a flood; police stations; fire stations; vehicle and equipment storage facilities and emergency operations centers that are needed for flood response activities before, during, and after a flood; and public and private utility facilities that are vital to maintaining or restoring normal services to flooded areas before, during, and after a flood.

"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 to improved or unimproved real estate, including but not limited to, buildings or other structures, mining, dredging, filling, grading, paving, excavating or drilling operations or storage of materials or equipment.

"Discontinued Use" means the relinquishment of a property or the cessation of a use or activity by the owner or tenant, excluding temporary or short term interruptions for the purpose of remodeling, maintaining or otherwise improving or rearranging the facility. A use shall be deemed as discontinued when such use is suspended as evidenced by the cessation of activities or conditions that constitute the principal use of the property.

~~"Elevation Certificate" — means the most current version of the Elevation Certificate form developed by the Federal Emergency Management Agency (FEMA Form 81-31) AN ADMINISTRATIVE TOOL OF THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP) THAT IS USED TO PROVIDE ELEVATION INFORMATION NECESSARY TO ENSURE COMPLIANCE WITH COMMUNITY FLOODPLAIN MANAGEMENT ORDINANCE, TO DETERMINE THE PROPER INSURANCE PREMIUM RATE, AND TO SUPPORT A REQUEST FOR A LETTER OF MAP AMENDMENT (LOMA) OR LETTER OF MAP REVISION BASED ON FILL (LOMR-F).~~

"Encroachment" means the advance or infringement of any uses, including but not limited to, ANTHROPOLOGICAL plant growth (INTENTIONAL PLANTINGS), fill, excavation, buildings, permanent structures, fencing, or other development into a floodplain which may impede and/or alter the flow or storage capacity of a floodplain, or cause an increase in the floodway elevation.

"Engineer" means a Professional Engineer registered in the State of Arizona.

Engineering Geologist means a Professional Engineering Geologist registered in the State of Arizona.

"Erosion", OR "EROSION HAZARD", means the process of the gradual wearing away of land masses. This peril is not, per se, covered under the NATIONAL FLOOD INSURANCE PROGRAM (NFIP) (see "flood-related erosion").

~~"Erosion Hazard" means the process of the wearing away of land masses. This peril is not per se covered under the NFIP (see "flood-related erosion").~~

"Exceptional Hardship" means a hardship that would result from failure to grant a variance which is exceptional, unusual, and peculiar to the property involved. Mere economic or financial hardship alone is not exceptional.

Inconvenience, aesthetic considerations, physical handicaps, personal preferences, or the disapproval of one's neighbors likewise cannot, as a rule, qualify as an exceptional hardship. All of these problems can be resolved through other means without granting a variance, even if the alternative is more expensive, or requires the property owner to build elsewhere or put the parcel to a different use than originally intended.

"FEMA" means the Federal Emergency Management Agency

"Flood or Flooding" means a general and temporary condition of partial or complete inundation of normally dry land areas from:

- A. The overflow of inland or tidal waters;
- B. The unusual and rapid accumulation or runoff of surface waters from any source, and/or
- C. The collapse or subsidence of land along the shore of a lake or other body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding as defined in this definition.

~~"Flood Boundary and Floodway Map (FBFM)" means the official map on which the Federal Emergency Management Agency (FEMA) has delineated both the Special Flood Hazard Areas and the regulatory floodway.~~

"Flood Elevation Determination" means a determination, by the Administrator, of the water surface elevations of the base flood, that is, the flood level that has a one percent or greater chance of occurrence in any given year.

~~"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 Fringe" means that area located between the regulatory floodway and the boundary of the 100-year floodplain as shown on the FLOOD INSURANCE STUDY. ~~Flood Boundary and Floodway Map~~

"Flood Insurance Rate Map (FIRM)" means the official map of the community, on which the Federal Insurance Administrator FEMA has delineated both the SPECIAL FLOOD HAZARD AREAS and the risk premium zones applicable to the community.

"Flood Insurance Study (FIS)" means the official report provided by the Federal Emergency Management Agency (FEMA) that includes flood profiles, ~~the Flood Insurance Rate Map~~, the Flood Boundary and Floodway Map, and the water surface elevations of the base flood.

"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 area within a community subject to a "special flood hazard" and the extent of the depths of associated flooding. Such a system typically includes channels, dams, reservoirs, levees, or dikes. These specialized flood modifying works are those constructed in conformance with sound engineering standards.

"Floodproofing" means any combination of structural and non-structural additions, changes, or adjustments to structures which reduce or eliminate flood damage to improved or unimproved real property, water and sanitary facilities, structures and their contents BY MEANS OTHER THAN ELEVATION.

"Floodproofing Certificate" – means the most current version of the Floodproofing Certificate form developed by the Federal Emergency Management Agency ~~(FEMA Form 81-65)~~.

"Flood-Related Erosion" means the collapse or subsidence of land along the shore of a lake or other body of water as a result of undermining caused by waves or currents of water exceeding anticipated cyclical levels or suddenly caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a flash flood or an abnormal tidal surge, or by some similarly unusual and unforeseeable event which results in flooding.

"Floodplain or Flood-Prone Area" means any land area susceptible to being inundated by water from any source (see definition of "flood or flooding"). "Floodplain" areas include the "flood fringe" and the "regulatory floodway".

"Floodplain Administrator" is the individual or his/her authorized representative authorized by the

Floodplain Board to administer, implement, and enforce the provisions of these regulations. MOST OFTEN THE STORMWATER SECTION DIRECTOR OR THE STORMWATER PROJECT MANAGER FOR THE FLOODPLAIN MANAGEMENT PROGRAM.

"Floodplain Board" is the City Council of the City of Flagstaff at such times as they are engaged in the administration, implementation, and enforcement of these regulations.

"Floodplain Management" means the operation of an overall program of corrective and preventive measures for reducing flood damage and preserving and enhancing where possible natural resources in the floodplain. Including, but not limited to, emergency preparedness plans, flood control works, floodplain management regulations and open space plans.

"Floodplain Management Regulations" means the zoning ordinances, subdivision regulations, building codes, health regulations, state statutes, special purpose ordinances (such as a floodplain management ordinance, grading ordinance, stormwater management ordinance, and erosion control ordinance) and other relevant applications of police power. The term describes such Federal, state, or local regulations, in any combination thereof, which provide standards for the purpose of flood damage prevention and reduction.

"Floodplain Use Permit" means a permit issued by the Floodplain Administrator under the provisions of these regulations for development of land located in a floodplain.

"Flood-Related Erosion Area Management" means the operation of an overall program of corrective and preventive measures for reducing flood-related erosion damage, including, but not limited to, emergency preparedness plans, flood-related erosion control works, and floodplain management regulations.

"Floodway" - see "Regulatory Floodway".

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

"Functionally Dependent Use" means a use which cannot be performed 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.

"Highest Adjacent Grade (HAG)" means the highest natural elevation, prior to fill or excavation, of the ground surface prior to construction next to the proposed walls of a structure.

"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 the Interior; or

D. Individually listed on a local inventory of 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.

"Lateral Addition" An addition to an existing structure that is beside and connected to the existing structure. If one building is connected to another through a covered breezeway or similar connection it is considered to be a separate building, and not an addition, for the purpose of this Ordinance.

"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.

"Lowest Floor" means the lowest floor of the lowest enclosed area (including basement) of a building. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered 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 requirements of this CITY Ordinance. The lowest floor elevation is defined as the bottom of the lowest floor joist, horizontal structural member, or duct work.

"Manufactured Home" means a structure, transportable in one (1) or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities.

For the purposes of floodplain management, the term "manufactured home" also includes park trailers, travel trailers and other similar vehicles placed on a site for greater than 180 consecutive days or which are not licensed and ready for highway use. The term "manufactured home" does not include a "recreational vehicle".

"Manufactured Home Park or Subdivision" means a parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for sale or rent.

"Map" means the ~~Flood Hazard Boundary Map (FHBM) or the Flood Insurance Rate Map (FIRM)~~ for the community as issued by FEMA.

"Market Value" shall be determined by the current Coconino County Assessor's Office assessed value or by an independent professional appraiser by estimating the cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation which has accrued since the structure was constructed. The cost of replacement of the structure shall be based on a square foot cost factor determined by reference to a building cost estimating guide recognized

by the building construction industry. The amount of depreciation shall be determined by taking into account the age and physical deterioration of the structure and functional obsolescence as approved by the Floodplain Administrator, but shall not include economic or other forms of external obsolescence. Use of replacement costs or accrued depreciation factors different from those contained in recognized building cost estimating guides may be considered only if such factors are included in a report prepared by an independent professional appraiser and supported by a written explanation of the differences.

"Mean Sea Level" means, for purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum, (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, 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.

"Mudslide (i.e., Mudflow) Area Management" means the operation of an overall program of corrective and preventive measures for reducing mudslide (i.e., mudflow) damage, including, but not limited to, emergency preparedness plans, mudslide control works, and floodplain management regulations.

"Mudslide (i.e. Mudflow), Prone Area" means an area with land surfaces and slopes of unconsolidated material where the history, geology, and climate indicate a potential for mudflow.

"New Construction" means, for the purposes of determining insurance rates, structures for which the "start of construction" commenced on or after the effective date of an initial FIRM or after December 31, 1974, whichever is later, and includes any subsequent improvements to such structures. For floodplain management purposes, "new construction" 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 Park or Subdivision" means a manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed, including, at a minimum, the installation of utilities, the construction of streets, and either final site grading or the pouring of concrete pads, and which is completed on or after the effective date of these floodplain regulations.

"Nonconforming Use" means a structure or the use of a structure or premises, which was lawful but not in conformity with these regulations before the adoption or amendment of these floodplain regulations.

"Nonresidential Structure" means any structure or any portion of a structure used exclusively for, or designed as and capable of being used for, without limitation, office, commercial, business, educational, public, industrial, factory, or governmental occupation.

"Obstruction" includes, but is not limited to, any dam, wall, wharf, embankment, levee, dike, pile,

abutment, protection, excavation, channelization, bridges, conduit, culvert, building, wire, fence, rock, gravel, fill, dumping, structure, vegetation, or other material in, along, across, or projecting into a watercourse which may alter, impede, retard or change the direction and/or velocity of the flow of water, or due to its location, its propensity to snare or collect debris carried by the flow of water, or its likelihood of being carried downstream.

"One Hundred-Year Flood" means the flood having a one percent chance of being equaled or exceeded in any given year (see "Base Flood").

"Person" includes an individual or his agent, firm, partnership, association, limited liability company, or corporation, or agent of the aforementioned groups, or this State or its agencies or political subdivisions.

"Program Deficiency" means a defect in a community's floodplain management regulations or administrative procedures that impairs effective implementation of those floodplain management regulations or of the National Flood Insurance Program standards.

"Reconstruction" means the rebuilding of an existing structure which has been partially or completely destroyed by any cause (e.g., fire, wind, flood) without increasing the floor area of the structure.

"Recreational Vehicle" means a vehicle which is:

- A. Built on a single chassis;
- B. 400 square feet or less when measured at the largest horizontal projection;
- C. Designed to be self-propelled or permanently towable by a light duty truck; and
- D. Designed primarily not for use as a permanent dwelling but as a temporary living quarters for recreational, camping, travel, or seasonal use.

"Regulatory Flood Elevation (RFE)" means an elevation one foot above the BASE FLOOD ELEVATION for a watercourse for which the BASE FLOOD ELEVATION has been determined and shall be as determined by the criteria developed by the Director of the Arizona Department of Water Resources for all other watercourses.

"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.

"Rehabilitation" means any improvements and repairs which are made to the interior or exterior of an existing structure but which do not result in any increase in the floor area of the structure.

"Remedy a Violation" means to bring the structure or other development into compliance with FEDERAL, State, or local floodplain management regulations, or, if this is not possible, to reduce the impacts of its noncompliance. Ways that impacts may be reduced include protecting the structure or other affected development from flood damages, implementing the enforcement provisions of this Ordinance or otherwise deterring future similar violations, or reducing FEDERAL OR STATE financial exposure with regard to the structure or other development.

"Residential Structure" means any structure or any portion of a structure that is used for, or designed as and capable of being used for, the temporary or permanent domicile of persons, including without limitation a dwelling unit, apartment house, boarding house, hotel, motel, nursing home, lodging house, congregate residence, jail, prison, and similarly used structures.

Soils Engineer means a Professional Soils Engineer registered in the State of Arizona.

"Special Flood Hazard Area (SFHA)" means an area in the floodplain subject to a 1 percent or greater chance of flooding in any given year. An area having special flood or flood-related erosion hazards, and shown on an FBFM or **THE** FIRM as Zone A, AO, AE, A99, or AH (see "Area of Special Flood Hazard").

"Start of Construction", includes substantial improvement and other proposed new development, 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 a 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.

"Stormwater Management Design Manual" means the most recent edition of the City of Flagstaff Stormwater Management Design Manual.

"Structure" means, for floodplain management purposes, that which is built or constructed, an edifice or building of any kind, or any piece of work artificially built up or composed of parts joined together in some definite manner. This includes, without limitation, 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 cumulative cost of restoring the structure to its before damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred.

"Substantial Improvement" means any repair, 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 the "start of construction" of the improvement. This term includes structures which have incurred "substantial damage", regardless of the actual repair work performed. The term does not, however, include either:

- A. 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 to assure safe living conditions;
- or

B. Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure".

"Surveyor" means a Registered Professional Land Surveyor in the State of Arizona.

"Variance" means a grant of relief from the requirements of this Ordinance which permits construction in a manner that would otherwise be prohibited by these 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 these regulations is presumed to be in violation until such time as that documentation is provided.

"Water Surface Elevation" means the height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, (or other datum, where specified) of floods of various magnitudes and frequencies in the floodplains of riverine areas.

"Watercourse" means a lake, river, creek, stream, wash, arroyo, channel, or other topographic feature on or over which waters flow at least periodically. "Watercourse" includes specifically designated areas in which substantial flood damage may occur.

~~"Watercourse Master Plan" means a hydraulic and hydrologic plan for a watercourse that examines the cumulative impacts of existing development and future encroachment in the floodplain and future development in the watershed on potential flood damages, and establishes technical criteria for subsequent development so as to minimize potential flood damages for all flood events up to and including the one hundred-year flood.~~

"WATERSHED MASTER PLAN" MEANS A HYDRAULIC AND HYDROLOGIC PLAN FOR A WATERCOURSE THAT EXAMINES THE CUMULATIVE IMPACTS OF EXISTING DEVELOPMENT AND FUTURE ENCROACHMENT IN THE FLOODPLAIN AND FUTURE DEVELOPMENT IN THE WATERSHED ON POTENTIAL FLOOD DAMAGES, AND ESTABLISHES TECHNICAL CRITERIA FOR SUBSEQUENT DEVELOPMENT SO AS TO MINIMIZE POTENTIAL FLOOD DAMAGES FOR ALL FLOOD EVENTS UP TO AND INCLUDING THE ONE HUNDRED-YEAR FLOOD.

12-01-001-0004 GENERAL PROVISIONS

12-01-001-0004.01 JURISDICTION

A. These regulations shall apply to all areas within the corporate limits of the City of Flagstaff, Arizona INCLUDING SPECIAL FLOOD HAZARD AREAS AND ADMINISTRATIVE FLOODPLAINS.

B. The provisions of these regulations shall apply to lands outside the corporate limits of the City of Flagstaff upon annexation of such lands.

12-01-001-0004.02 BASIS FOR ESTABLISHING SPECIAL FLOOD HAZARD AREAS

A. The Federal Emergency Management Agency (FEMA) scientific and engineering report entitled "Flood Insurance Study, dated September 3, 2010, Coconino County, Arizona and Incorporated Areas" with accompanying Flood Insurance Rate Maps (FIRM's), and all

subsequent amendments and/or revisions, identifying SPECIAL FLOOD HAZARD AREAS, are hereby adopted by reference and declared to be a part of this Ordinance. The Flood Insurance Study (FIS) and the FIRM panels are on file in the office of the Floodplain Administrator at ~~City Hall, City of Flagstaff, 211 W. Aspen Ave. Flagstaff, AZ 86001~~ 2323 N WALGREENS DR. FLAGSTAFF, AZ 86004 AND ONLINE AT FLAGSTAFFAZ.GOV/4315/FLOOD-INFORMATION.

The FIS and attendant mapping is the minimum area of applicability of these regulations and may be supplemented by studies for other areas which allow implementation of this Ordinance and which are recommended to the Floodplain Board by the Floodplain Administrator. The Floodplain Board, within its area of jurisdiction, shall delineate, or may by rule require developers of land to delineate, for areas where development is ongoing or imminent, and thereafter as development becomes imminent, floodplains consistent with the criteria developed by the Federal Emergency Management Agency and the Director of the Arizona Department of Water Resources.

B. The Floodplain Board may adopt additional floodplain studies or reports by reference and declare them to be part of these regulations, provided that any differences in floodplain delineation between such additional studies or reports and the effective Flood Insurance Rate Map(s) shall be resolved by applying those provisions which result in a broader floodplain delineation. A copy of such studies shall be on file in the office of the Floodplain Administrator.

12-01-001-0004.03 COMPLIANCE

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

12-01-001-0004.04 ABROGATION AND GREATER RESTRICTIONS:

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

12-01-001-0004.05 INTERPRETATION:

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

- A. Considered as minimum requirements;
- B. Liberally construed in favor of the governing body; and
- C. Deemed neither to limit nor repeal any other powers granted under State Statutes.

12-01-001-0004.06 WARNING AND DISCLAIMER OF LIABILITY:

The degree of flood protection required by these regulations is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This Ordinance does not imply that land outside the SPECIAL FLOOD HAZARD AREAS or uses permitted within such areas will be free from flooding or flood damages. These regulations shall not create liability on the part of the City of Flagstaff, any officer or employee thereof, the State of Arizona, or the Federal Emergency Management Agency, for any flood damages that

result from reliance on these regulations or any administrative decision lawfully made thereunder.

12-01-001-0004.07 STATUTORY EXEMPTIONS:

A. In accordance with A.R.S. Section 48-3609(H), unless otherwise expressly provided, this and any regulation adopted pursuant to said statute do not affect:

1. Existing legal uses of property or the right to continuation of such legal use. However, if a nonconforming use of land or a building or structure is discontinued for twelve (12) months or destroyed to the extent of fifty (50) percent of its market value, as determined by an independent professional appraiser, any further use shall comply with ~~these regulations~~ THIS ORDINANCE.
2. Reasonable repair or alteration of property for the purposes for which the property was legally used on August 3, 1984, or on the date any regulations affecting such property takes effect, except that any alteration, addition or repair to a nonconforming building or structure which would result in increasing its flood damage potential by fifty (50) percent or more shall be either flood-proofed or elevated to or above the REGULATORY FLOOD ELEVATION.
3. Reasonable repair of structures constructed with the written authorization required by A.R.S. Section 48-3613.
4. Facilities constructed or installed pursuant to a CERTIFICATE of environmental compatibility issued pursuant to Title 40, Chapter 2, Article 6.2, Arizona revised Statutes (A.R.S. Section 40-360, et seq.). ~~B. BEFORE THE FOLLOWING TYPES OF CONSTRUCTION AUTHORIZED BY A.R.S. § 48-3613(B) BEGIN, THE RESPONSIBLE PERSON MUST SUBMIT PLANS FOR THE CONSTRUCTION TO THE FLOODPLAIN BOARD (THE "BOARD") FOR REVIEW AND COMMENT PURSUANT TO A.R.S. § 48-3613(C). In accordance with A.R.S. Section 48-3613, written authorization shall not be required, nor shall the Floodplain Board (the "Board") prohibit:~~
5. The construction of bridges, culverts, dikes, and other structures necessary for the construction of public highways, roads, and streets intersecting or crossing a watercourse.
6. The construction of storage dams for watering livestock or wildlife and structures on banks of a watercourse to prevent erosion of or damage to adjoining land if the structure will not divert, retard or obstruct the natural channel of the watercourse, or dams for the conservation of floodwaters as permitted by A.R.S. Title 45, Chapter 6.
7. Construction of tailing dams and waste disposal areas for use in connection with mining and metallurgical operations. This paragraph does not exempt those sand and gravel operations which will divert, retard, or obstruct the flow of waters in any watercourse from complying with and acquiring authorization from the Board pursuant to regulations adopted by the Board under said statute.
8. Other construction if it is determined by the Board that written authorization is unnecessary.
9. Any flood control district, county, city, town, or other political subdivision from exercising powers granted to it under A.R.S. Title 48, Chapter 21, Article 1 said statute.

10. The construction of streams, waterways, lakes, and other auxiliary facilities in conjunction with development of public parks and recreation facilities by a public agency or political subdivision.

11. The construction and erection of poles, towers, foundations, support structures, guy wires, and other facilities related to power transmission as constructed by any utility whether a public service corporation or a political subdivision.

~~C. Before any construction authorized by Subsection B of this Section may begin, the responsible person must submit plans for the construction to the Board for review and comment. These exemptions do not preclude any person from liability if that person's actions increase flood hazards to any other person's property.~~

C. IN ACCORDANCE WITH A.R.S. § 48-3613(D), IN ADDITION TO OTHER PENALTIES OR REMEDIES OTHERWISE PROVIDED BY LAW, THIS STATE, A POLITICAL SUBDIVISION OR A PERSON WHO MAY BE DAMAGED OR HAS BEEN DAMAGED AS A RESULT OF THE UNAUTHORIZED DIVERSION, RETARDATION, OR OBSTRUCTION OF A WATERCOURSE HAS THE RIGHT TO COMMENCE, MAINTAIN, AND PROSECUTE ANY APPROPRIATE ACTION OR PURSUE ANY REMEDY TO ENJOIN, ABATE, OR OTHERWISE PREVENT ANY PERSON FROM VIOLATING OR CONTINUING TO VIOLATE THIS SECTION OR REGULATIONS ADOPTED PURSUANT TO A.R.S. TITLE 48, CHAPTER 21, ARTICLE 1. IF A PERSON IS FOUND TO BE IN VIOLATION OF THIS SECTION, THE COURT SHALL REQUIRE THE VIOLATOR TO EITHER COMPLY WITH THIS SECTION IF AUTHORIZED BY THE FLOODPLAIN BOARD OR REMOVE THE OBSTRUCTION AND RESTORE THE WATERCOURSE TO ITS ORIGINAL STATE. THE COURT MAY ALSO AWARD SUCH MONETARY DAMAGES AS ARE APPROPRIATE TO THE INJURED PARTIES RESULTING FROM THE VIOLATION INCLUDING REASONABLE COSTS AND ATTORNEY FEES.

~~D. In addition to other penalties or remedies otherwise provided by law, this State, a political subdivision thereof, or a person who may be damaged or has been damaged as a result of the unauthorized diversion, retardation, or obstruction of a watercourse has the right to commence, maintain, and prosecute any appropriate action or pursue any remedy to enjoin, abate, or otherwise prevent any person from violating or continuing to violate this section or regulations adopted pursuant to A.R.S. Section 48-3610. If a person is found to be in violation of this section, the court shall require the violator to either comply with this section if authorized by the Board or remove the obstruction and restore the watercourse to its original state. The court may also award such monetary damages as are appropriate to the injured parties resulting from the violation including reasonable costs and attorney fees.~~

12-01-001-0004.08 NONCONFORMING USES:

A structure or the use of a structure or premises which existed and was lawful, but not in conformity, before the adoption or amendment of these regulations, may be continued subject to the following conditions:

A. No existing structure in the floodway shall be expanded, but may be modified, altered or repaired to incorporate elevation or flood proofing measures, provided such measures comply with the substantial improvement requirements of this ordinance and do not raise the level of the base flood or floodway.

B. If a nonconforming use of land or a building or structure is discontinued for twelve (12) months or destroyed to the extent of fifty percent of its market value, as determined by a

competent professional appraiser, any further use shall comply with these regulations. Intent to resume active operations shall not affect the foregoing.

C. If any nonconforming building in the floodplain is substantially damaged, it shall not be reconstructed except in conformance with the provisions of these regulations.

D. Additions to nonconforming structures shall be constructed in conformance with the provisions of these regulations.

12-01-001-0004.09 DECLARATION OF PUBLIC NUISANCE:

~~Every new structure, building, fill, excavation, or development~~ **ALL DEVELOPMENT** located or maintained within any Special Flood Hazard Areas after August 8, 1973, in violation of these regulations, is a public nuisance per se and may be abated, prevented, or restrained by action of the City of Flagstaff.

12-01-001-0004.10 VIOLATIONS AND ABATEMENT

A. No structure or land within the Special Flood Hazard Area shall be constructed, located, extended, converted or altered without full compliance with the requirements of this Ordinance and other applicable regulations.

B. Upon discovery of a violation of the provisions of these regulations, the Floodplain Administrator shall issue a written Notice of Violation to the person or property owner responsible for such violation. The Notice of Violation shall specify the nature of the violation and order abatement of the violation.

C. If the Floodplain Administrator determines that a violation of this ordinance does not result in a life-safety issue, or does not create an immediate threat to surrounding properties, then the responsible party shall have 30 days following a Notice of Violation in order to remedy the violation, or develop a remediation plan acceptable to the Floodplain Administrator, before any penalties are assessed pursuant to Section 12-01-001-0004.11.

D. It is unlawful for a person to engage in any development or to divert, retard or obstruct the flow of waters in a watercourse if it creates a hazard to life or property without securing the written authorization required by Arizona Revised Statute (ARS) section 48-3613. Where the watercourse is a delineated floodplain it is unlawful to engage in any development affecting the flow of waters without securing written authorization required by section ARS 48- 3613.

E. Stormwater that is generated and concentrated as a result of single, residential lot development is not considered a watercourse and not regulated under this ordinance.

F. The Floodplain Administrator shall reserve the right to submit to the Administrator of the Federal Emergency Management Agency (FEMA) a declaration for denial of insurance, stating that a property is in violation of a specified federal, state or local law, regulation, or ordinance, pursuant to 44 CFR Ch. 1, Part 73 – Implementation of Section 1316 of the National Flood Insurance Act of 1968.

G. Nothing contained herein shall prevent the City of Flagstaff from taking such lawful action as is necessary to prevent or remedy any violation.

12-01-001-0004.11 PENALTIES

Violations of the provisions of these regulations by failure to comply with any of their requirements, including violations of conditions and safeguards established in connection with conditions, shall constitute a misdemeanor. Any person who violates the provisions of these regulations or fails to comply with any of their requirements shall, upon conviction thereof, be guilty of a Class 2 misdemeanor and subject to the associated fines and penalties established by the Arizona Revised Statutes, §§ 48-3615 and 13-802B. In addition, such person shall pay all costs and expenses involved in the case. A separate offense shall be deemed committed for each day such violation continues.

12-01-001-0005 ADMINISTRATION

12-01-001-0005.1 FLOODPLAIN BOARD

The City Council of Flagstaff, Arizona is hereby established as the Floodplain Board (the "Board").

A. Powers of the Board:

1. To delineate or by rule require developers of land to delineate, for areas where development is ongoing or imminent, and thereafter as development becomes imminent, floodplains consistent with criteria developed by the Federal Emergency Management Agency and the Director of Water Resources.
2. To adopt, amend, repeal, enforce, and otherwise administer floodplain management resolutions, rules, regulations, and orders pertaining to the delineated floodplains within the City of Flagstaff including comprehensive floodplain management and watercourse master plans, pursuant to the regulations of the City of Flagstaff setting forth requirements for the enactment and amendment of ordinances and resolutions.
3. To enter into cooperative agreements authorized by A.R.S. Section 48-3624.
4. To publicly hear and decide appeals and/or variance requests from the review, order, requirement, decision, or determination of the Floodplain Administrator.

12-01-001-0005.2 FLOODPLAIN ADMINISTRATOR

The Stormwater Manager is hereby appointed as Floodplain Administrator. The Floodplain Administrator may delegate to others the duties and authority necessary to carry out the duties outlined in this Section. The Floodplain Administrator shall administer and implement these regulations by granting or denying Floodplain Use Permit applications in accordance with the provisions herein. The Floodplain Administrator shall have the authority to establish methods and standards for constructing the flood protection measures required by this Ordinance when the details of such methods and standards have not been specified by the Ordinance. The various Technical Bulletins published by FEMA are considered to be acceptable methods and standards, provided they are not less restrictive than requirements already established by other City standards and regulations.

A. Duties of the Floodplain Administrator shall include, but not be limited to the following:

1. Administer and enforce the provisions of these regulations.

2. Require Floodplain Use Permits for all proposed construction and other developments including the placement of manufactured homes and fill within SPECIAL FLOOD HAZARD AREAS as identified ON the FIRM.
3. Review all Floodplain Use Permits applications to determine that:
 - a. The permit requirements of these regulations have been satisfied;
 - b. All other required State and Federal permits pertaining to construction in floodplains and watercourses have been obtained;
 - c. The site is reasonably safe from flooding; and
 - d. The proposed development does not adversely affect the carrying capacity of SPECIAL FLOOD HAZARD AREAS, WHERE THE BASE FLOOD ELEVATION HAS BEEN DETERMINED. For purposes of these regulations, "adversely affect" means 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 at any point.
4. Establish the criteria and policy by which consistent technical evaluations of the floodplain are made.
5. Formulate overall comprehensive floodplain management and watercourse master plans.
6. When Base Flood Elevation data has not been provided in accordance with Section 12-01-001-0004.02, the Floodplain Administrator shall obtain, review, and reasonably utilize any BASE FLOOD ELEVATION data available from a Federal, State, or other source, including data developed pursuant to paragraph 12-01-001- 0006.04, as criteria for requiring that new construction, substantial improvements, or other development in Zone A on the FIRM meet the provisions of these regulations. Any such information shall be consistent with the requirements of the Federal Emergency Management Agency and the Director of Arizona Department of Water Resources.
7. Delineate or by rule require developers of land located in Zones "A", or along watercourses that constitute a flood hazard as determined by the criteria established by the Arizona Department of Water Resources (ADWR) in State Standard 2-96 that do not have BASE FLOOD ELEVATION or floodway data, to delineate for areas where development is ongoing or imminent, floodplains and floodways consistent with criteria developed by the Federal Emergency Management Agency and the Director of the Arizona Department of Water Resources.
8. In those areas along a watercourse where the channel width, topography, and/or channel gradient clearly vary from the cross-section and profile data in the FIS, FIRM, and/or FBFM, the Floodplain Administrator may require a floodplain delineation re-study to ensure that the Base Flood Elevation data and horizontal location of the floodway and flood fringe are correctly shown on any property prior to development.
9. Obtain and maintain for public inspection and make available as needed for Flood Insurance Policies or affecting Increased Cost of Construction Coverage:

- a. The certified REGULATORY FLOOD ELEVATION required for residential structures in Section 12-01-001- 0006.1.A.3.c;
- b. The certification required for manufactured homes in Section 12-01-001-0006.5.A.1;
- c. The floodproofing certification required for floodproofed non-residential structures in Section 12-01- 001-0006.1.A.3.d.3;
- d. The certified elevation required for subdivisions in Section 12-01-001-0006.4.E;
- e. The flood vent certification required in Section 12-01-001-0006.A.3.f;
- f. Permit records for repair of flood-related damage to structures on a cumulative basis Improvements, modifications, and additions to existing buildings are counted cumulatively for the 10 years prior to the date of application for construction.
- g. The Floodplain Administrator shall require that the above certifications are provided using the most current version of the FEMA elevation certificate and Floodproofing certificate forms.
- h. Obtain and maintain improvement AND DAMAGE calculations.
- ~~i. Maintain a record of all variance actions, including justification for their issuance, and report such variances issued in the biennial report submitted to the Federal Emergency Management Agency.~~
- ~~j. Complete and submit a Biennial Report to the Federal Emergency Management Agency.~~

10. Whenever a watercourse is to be altered or relocated:

- a. Notify adjacent communities and the Arizona Department of Water Resources prior to such alteration or relocation of a watercourse, and submit evidence of such notification to the Federal Emergency Management Agency (FEMA) through appropriate notification means;
- b. Require that the flood carrying capacity of the altered or relocated portion of said watercourse is maintained.
- c. Base FLOOD ELEVATION and rate of flow due to physical alterations:
 - (1) Base FLOOD ELEVATIONS may increase or decrease resulting from physical changes affecting flooding conditions. As soon as practicable, but not later than six months after the date such information becomes available, the Floodplain Administrator shall notify the Federal Emergency Management Agency (FEMA) of the changes by submitting technical or scientific data in accordance with Volume 44 Code of Federal Regulations section 65.3. Such a submission is necessary so that upon confirmation of those physical changes affecting flooding conditions, risk premium rates and floodplain management requirements will be based upon current data.

(2) Within one hundred twenty (120) days after completion of construction of any flood control protective works which changes the rate of flow during the flood or the configuration of the floodplain upstream or downstream from or adjacent to the project, the person or agency responsible for installation of the project shall provide to the governing bodies of all jurisdictions affected by the project a new delineation of all floodplains affected by the project. The new delineation shall be done according to the criteria adopted by the Director of the Arizona Department of Water Resources, CITY OF FLAGSTAFF, AND FEMA.

~~11. Within one hundred twenty (120) days after completion of construction of any flood control protective works which changes the rate of flow during the base flood or the configuration of the floodplain upstream or downstream from or adjacent to the project, the person, or agency responsible for installation of the project shall provide to the governing bodies of all jurisdictions affected by the project a new delineation of all floodplains affected by the project. The new delineations shall be done according to the criteria adopted by the Federal Emergency Management Agency (FEMA), the Director of the Arizona Department of Water Resources and the City of Flagstaff.~~

11. Advise the Flood Control District of Coconino County (the "District") and any adjacent jurisdiction having responsibility for floodplain management in writing and provide a copy of any development plan of all applications for Floodplain Use Permits or variances to develop land in a floodplain or floodway within one mile of the boundary between the City's area of jurisdiction and the area of jurisdiction of the District. Also, advise the District and any jurisdiction having responsibility for floodplain management in writing and provide a copy of any development plan of any major development proposed within a floodplain or floodway which could affect floodplains, floodways or watercourses outside the City's area of jurisdiction.

12. Make interpretations where needed as to the exact location of the boundaries of the SPECIAL FLOOD HAZARD AREAS (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). Any person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 12-01-001-0007.1.

13. Take actions on violations of these regulations as required in Section 12-01-001-0004.10 herein.

14. Notify the Administrator and Director of the Arizona Department of Water Resources of acquisition by means of annexation, incorporation, or otherwise, of additional areas of jurisdiction.

B. Substantial Improvement and Substantial Damage Procedures.

Develop detailed procedures REFERENCING LAST FEMA SI/SD PUBLICATION for identifying and administering requirements for substantial improvement and substantial damage, to include defining "Market Value." Assure procedures are coordinated with other departments and divisions and implemented by city staff.

12-01-001-0005.3 ESTABLISHMENT OF FLOODPLAIN USE PERMIT:

A. Except as provided in ARS section 48-3625, a person shall not engage in any development which will divert, retard or obstruct the flow of waters in any watercourse without securing written authorization from the Floodplain Administrator. Where the watercourse is a delineated floodplain no development shall take place in the floodplain without written authorization from the FLOODPLAIN ADMINISTRATOR.

B. Floodplain Use Permit, issued by the Floodplain Administrator, shall be obtained prior to any construction or substantial improvement of any building, structure or portion thereof; including placement of manufactured homes; prior to the use or change of use of land, building or structure; prior to the change or extension of a non-conforming use; and prior to the placement of fill in the flood fringe. Application for a Floodplain Use Permit shall be made on forms furnished by the Floodplain Administrator.

C. The following information, at a minimum, is required for a Floodplain Use Permit application:

1. Plans in duplicate drawn to an engineering scale showing the nature, location, dimensions, and elevation of the area in question; existing and proposed structures, fill, storage of materials; and existing and proposed drainage facilities.
2. Proposed elevation in relation to mean sea level, of the lowest floor (including basement) of all structures. In Zone AO elevation of existing highest adjacent natural grade and proposed elevation of lowest floor of all structures.
3. Proposed elevation in relation to mean sea level to which any nonresidential structure will be flood proofed.
4. Certification by a REGISTERED PROFESSIONAL engineer or architect that the flood proofing methods for any nonresidential structure meet the flood proofing criteria in Section 12-01-001-0006.1.A.3.d.3.
5. Base FLOOD ELEVATION data for subdivision proposals or other development GREATER THAN 50 LOTS OR 5 ACRES, WHICHEVER IS THE LESSER.
6. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.
7. The signatures of all property owners for all property subject to the development request on the permit.
8. Surface (i.e., plan) view, drawn to an engineering scale, showing all elevation and contours; fill and storage elevations; sizes, locations and spatial arrangement of all proposed, anticipated, and existing structures on the site; location and elevations of streets, water supply and sanitary facilities.
9. Specifications for building construction and materials, filling, dredging, grading, channel improvements and changes, storage of materials, water supply and sanitary facilities.

D. The Floodplain Administrator may require the applicant to furnish additional information, data, and details as deemed necessary, by the Floodplain Administrator, to evaluate the effects of the proposed construction upon the floodplain, including without limitation:

1. A detailed floodplain analysis, performed by a registered professional engineer, of the flood profile, Base Flood Elevations, floodway, and velocities, using methodologies acceptable to the City of Flagstaff Floodplain Administrator, Director of the Arizona Department of Water Resources, and the Federal Emergency Management Agency (FEMA), including existing and anticipated uses.
2. Cross section showing the floodplain surrounding the watercourse, cross sections of the area to be occupied by the proposed development, and Base Flood Elevations.
3. A profile showing the slope of the flow line of the channel or thalweg of the watercourse.
4. A structural analysis by a registered professional engineer showing that any proposed structure(s) will be adequately designed and constructed to prevent flotation, collapse, or lateral movement of the structure(s) resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy, scour and other erosion hazards.
5. Provide any other information needed to ensure that the proposed construction complies with this ordinance.

E. The Floodplain Administrator shall consider the following potential impacts upon review of all Floodplain Use Permit applications:

1. The effects upon lands upstream, downstream and in the immediate vicinity of the proposed development.
2. The effects upon the flood profile and channel stability.
3. The effects upon any tributaries to the main watercourse, drainage channels and any other drainage facilities or systems.
4. Whether the proposed use of a structure is intended for human occupancy.
5. The potential danger to persons upstream, downstream and in the immediate vicinity of the proposed development.
6. Whether any proposed changes in the watercourse will have an adverse environmental impact on the watercourse, including without limitation, erosion of streambanks and stream side trees, vegetation, and wildlife.
7. Whether any proposed water supply, sanitary sewer systems and other utility systems can prevent disease, contamination and unsanitary or hazardous conditions during a flood.
8. The relationship of the proposed development to elements of any applicable City of Flagstaff master plan or other floodplain management program.
9. Whether safe access is available to the proposed development in times of flood for ordinary and emergency vehicles.
10. Whether the cumulative effect of the proposed development, with other existing and anticipated uses, will increase flood heights.

11. Whether expected flood heights, velocities, duration, rate of rise, channel stability and sediment transport of the floodwaters expected at the site will adversely effect the development or the surrounding property.

F. Upon review of a Floodplain Use Permit application and consideration of the provisions of these regulations, the Floodplain Administrator may attach conditions to the approval of the Floodplain Use Permit as he/she deems necessary. Such conditions may include, but are not limited to:

1. Modification of waste disposal and water supply facilities.
2. Limitations on periods of use and operation.
3. Impositions of operational controls, sureties, and deed restrictions.
4. Requirements for construction of channel modifications, dikes, levees, and other protective measures.
5. Floodproofing measures as described in Section 12-01-001-0006.1.A.3.

G. The Floodplain Administrator shall act on an application for a Floodplain Use Permit within thirty (30) days from receipt of the complete application. If the Floodplain Administrator determines that the proposed use is located within the regulatory floodway and is prohibited under Section 12-01-001-0006.7, the Floodplain Administrator shall deny the application.

H. An applicant for a Floodplain Use Permit shall pay the floodplain use permit fee in Section 12-02-002-0003. If the Floodplain Administrator, pursuant to Section 12-01-001-0005.3.D.1, requires the applicant to furnish a floodplain study, the applicant shall also pay any applicable review fee established in Section 12-02-002-0003.

I. Every person who has obtained a Floodplain Use Permit shall conduct all construction authorized by said permit in accordance with the approved application, design, and permit conditions.

J. Prior to issuance of a Floodplain Use Permit, the applicant must submit evidence to the Floodplain Administrator that necessary State and Federal permits have been obtained.

K. The Floodplain Administrator may require deed restrictions or performance bonds, assurances or other security to ensure the performance of the conditions and restrictions imposed on the Floodplain Use Permit.

12-01-001-0006 PROVISIONS FOR FLOOD HAZARD REDUCTION

12-01-001-0006.1 DEVELOPMENT STANDARDS IN FLOOD FRINGE AREAS

A. In all ~~areas~~ of special flood hazard AREAS the following development standards are required:

1. Anchoring:

- a. All new construction and substantial improvements shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy; and.
- b. All manufactured homes shall meet the anchoring standards of 12-01-001-0006.5.A.2.

2. Construction Materials and Methods:

- a. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage.
- b. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage.
- c. All new construction, substantial improvements, and other proposed new development shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or located AT OR ABOVE THE REGULATORY FLOOD ELEVATION so as to prevent water from entering or accumulating within their components during conditions of flooding.
- d. All new construction, substantial improvements, and other development within Zones AH or AO shall be constructed so that adequate drainage paths around the structure(s) on slopes guide flood waters around and away from proposed or existing structures.
- e. All new construction, substantial improvements or other development shall be designed and constructed in accordance with the current City of Flagstaff Design and Construction Standards and Specifications and the City of Flagstaff Stormwater Management Design Manual.

3. Elevation and Floodproofing Requirements:

- a. All new and substantially improved or substantially damaged residential structures within Zones AE and AH of SPECIAL FLOOD HAZARD AREAS shall have the lowest floor (including basement) AND ATTACHED MACHINERY AND EQUIPMENT elevated at or above the REGULATORY FLOOD ELEVATION. Floodproofing of new residential structures is prohibited. Nonresidential structures may meet the standards in Section 12-01-001-0006.1.A.3.d and e. The lowest floor elevation is defined as the bottom of the lowest floor joist, horizontal structural member, or duct work.
- b. All new and substantially improved residential structures in Zone AO shall have the lowest floor (including basement) and attached machinery and equipment be elevated above the highest adjacent grade at least one foot higher than the depth number on the FIRM, or at least two feet if no depth number is specified. Nonresidential structures in AO Zones may meet the standards in Section 12-01-001-0006.1.A.3.d and e. Upon completion of the structure, a registered professional engineer or surveyor shall certify to the Floodplain Administrator that the elevation of the structure meets this standard.
- c. All new or substantially improved residential structures shall have the lowest floor elevation certified by a REGISTERED PROFESSIONAL engineer or surveyor or architect

and provide an elevation certificate to the Floodplain Administrator. IN ZONES AE AND AH, THE BASE FLOOD ELEVATION IS DETERMINED FROM THE FIS AND/OR FIRM.

D. A GARAGE ATTACHED TO A RESIDENTIAL STRUCTURE, CONSTRUCTED WITH THE GARAGE FLOOR SLAB BELOW THE REGULATORY FLOOD ELEVATION, MUST BE DESIGNED TO ALLOW FOR THE AUTOMATIC ENTRY AND EXIT OF FLOOD WATERS AND MUST BE USED SOLELY FOR PARKING, ACCESS AND/OR STORAGE. SEE {THE NUMBERING SYSTEM USED BY THE COMMUNITY}.

E. Nonresidential structures shall either be elevated in conformance with Section 12-01-001- 0006.1.A.3.a. through ce. or together with attendant utility and sanitary facilities:

1. be flood proofed so that below the regulatory flood level the structure is watertight with walls substantially impermeable to the passage of water;
2. have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and
3. be certified by a REGISTERED PROFESSIONAL engineer or architect that the standards of this subsection are satisfied. An elevation certificate shall be provided to the Floodplain Administrator prior to issuance of a building permit.

E. Whenever flood proofing measures are required, a REGISTERED professional engineer or architect shall develop and/or review structural design, specifications, and plans for the construction, and design and methods of construction are in accordance with accepted standards of practice for meeting the applicable provisions of these regulations. The following measures shall be utilized, where appropriate, to ensure that design, specifications, and methods of construction will withstand flood depths, pressures, velocities, impact, and uplift forces and other factors associated with flooding:

- (1) anchoring of structures, or addition of mass or weight to structures to prevent flotation;
- (2) reinforcement of walls and floors to resist rupture or collapse caused by water pressures or floating debris;
- (3) construction of wells, water supply systems and wastewater treatment/disposal systems so as to prevent the entrance of flood waters into such systems;
- (4) subsurface drainage systems to relieve external pressures on foundation walls or basement floors;
- (5) cut-off valves or backflow prevention devices on sewer lines or the elimination of gravity flow basement drains; and
- (6) placement of utilities at or above the REGULATORY FLOOD ELEVATION.

G. For all new construction and substantial improvements, fully enclosed areas below the lowest floor that are useable 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:

(1) 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 on opposite sides of each enclosed area, if physically possible. If a structure has more than one enclosed area, each area must have openings on exterior walls to allow floodwater to enter and exit directly.

(2) The bottom of all openings shall be no higher than one foot above the adjacent grade; and

(3) Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters. Openings which require human intervention will not meet the requirement for an opening.

FOR ENGINEERED OPENINGS:

ENGINEERED OPENINGS (OR COVERS AND DEVICES) THAT ARE SPECIFICALLY DESIGNED AND CERTIFIED BY A REGISTERED ENGINEER OR ARCHITECT AS MEETING THE REQUIRED PERFORMANCE AND DESIGN REQUIREMENTS.

ENGINEERED OPENINGS (OR COVERS AND DEVICES) FOR WHICH AN EVALUATION REPORT HAS BEEN ISSUED BY THE INTERNATIONAL CODE COUNCIL (ICC) EVALUATION SERVICE, INC. (ICC-ES), A SUBSIDIARY OF THE INTERNATIONAL CODE COUNCIL, INC.

(4) A garage door, which does not have an opening in conformity with the design criteria in Section 12-01-001-0006.1.A.3.f, does not meet the requirement for an opening.

H. Additions to existing structures or buildings shall be constructed such that the lowest floor is in conformity with the standards set forth in Section 12-01-001-0006.1.A.3.

I. Manufactured homes shall meet the standards set forth in Section 12-01-001-0006.1 and also the standards set forth in Section 12-01-001-0006.5.

4. Structural fill shall be allowed within the flood fringe, under a Floodplain Use Permit, to the extent that it is not prohibited under any other regulation and the following standards are met:

a. Fill which is intended to elevate a structure at or above the REGULATORY FLOOD ELEVATION must be designed and compacted to 95 percent of the maximum density obtainable with the Standard Proctor Test method issued by the American Society for Testing and Materials (ASTM Standard D-698) or other equivalent method. The fill must extend a minimum of 15 feet, or as approved by the Floodplain Administrator, beyond the exterior walls of any structure erected thereon before dropping below the BASE FLOOD ELEVATION. Fill must be designed and certified by A REGISTERED PROFESSIONAL

engineer.

b. Fill slopes for granular material can be no steeper than two horizontal to one vertical unless substantiating data, prepared by a REGISTERED PROFESSIONAL soils engineer or engineering geologist, justifying steeper slopes is provided.

c. Adequate protection must be provided for fill slopes exposed to flood waters with velocities of five feet per second or less by covering the slopes with grasses, or other equivalent planting that is able to withstand the design velocities.

d. Adequate protection must be provided for fill slopes exposed to flood waters with velocities greater than five feet per second by armoring the slopes in accordance with the standards in the City of Flagstaff Stormwater Management Design Manual.

e. New structures constructed on structural fill must have the lowest floor elevation in conformance with Section 12-01-001-0006.1.A.3 herein.

5. All temporary and permanent structures shall be anchored to prevent flotation, which could result in damage to other structures, restriction of bridge openings and other sections of the regulatory floodway.

6. Attendant utility and sanitary facilities for new construction and substantial improvements shall be elevated and/or flood proofed to the Regulatory Flood Elevation.

7. Garages and low cost accessory structures

a. Attached garages.

(1) A garage attached to a residential structure, constructed with the garage floor slab below the REGULATORY FLOOD ELEVATION, must be designed to allow for the automatic entry of flood waters. See Section 12-01-001-0006.1.A.3.f. Areas of the garage below the REGULATORY FLOOD ELEVATION must be constructed with flood resistant materials. See Section 12-01-001-0006.1.A.2.

(2) A garage attached to a nonresidential structure must meet the above requirements or be dry floodproofed.

b. Detached garages and accessory structures.

~~(1) "Accessory structure" used solely for parking (2 car detached garages or smaller) or limited storage (small, low-cost sheds 200 sq ft or less), may be constructed such that its floor is below the Regulatory Flood Elevation, provided the structure is designed and constructed in accordance with the following requirements:~~

(1) FEMA PUBLICATION P-2140: FLOODPLAIN MANAGEMENT REQUIREMENTS FOR AGRICULTURAL STRUCTURES AND ACCESSORY STRUCTURES, DEFINES AN ACCESSORY STRUCTURE AS: FOR FLOODPLAIN MANAGEMENT PURPOSES, ACCESSORY STRUCTURES ARE STRUCTURES THAT ARE ON THE SAME PARCEL OF PROPERTY AS A PRINCIPAL STRUCTURE, THE USE OF WHICH IS INCIDENTAL TO THE USE OF THE PRINCIPAL STRUCTURE. ACCESSORY STRUCTURES MUST BE USED FOR PARKING OR STORAGE, BE

SMALL AND REPRESENT A MINIMAL INVESTMENT BY OWNERS, AND HAVE LOW DAMAGE POTENTIAL. FEMA CONSIDERS "SMALL" TO MEAN NOT LARGER THAN A ONE-STORY TWO-CAR GARAGE. EXAMPLES OF SMALL ACCESSORY STRUCTURES INCLUDE, BUT ARE NOT LIMITED TO, DETACHED GARAGES, STORAGE AND TOOL SHEDS, AND SMALL BOATHOUSES.

(2) STRUCTURE SIZE - THE FOOTPRINT OF A TYPICAL TWO-CAR GARAGE IS ABOUT 600 SQUARE FEET IN AREA. OR LIMITED STORAGE (SMALL, LOW COST SHEDS 200 SQ. FT. OR LESS).

(3) STORAGE - CONTENTS STORED IN WET FLOODPROOFED STRUCTURES WILL GET WET DURING FLOODING.

- (a) Use of the accessory structure must be limited to parking or limited storage;
- (b) The portions of the accessory structure located below the REGULATORY FLOOD ELEVATION must be built using flood-resistant materials;
- (c) The accessory structure must be adequately anchored to prevent flotation, collapse and lateral movement;
- (d) Any mechanical and utility equipment in the accessory structure must be elevated or floodproofed to or above the REGULATORY FLOOD ELEVATION;
- (e) The accessory structure must comply with floodplain encroachment provisions in Section 12-01-001-0006.7; and
- (f) The accessory structure must be designed to allow for the automatic entry of flood waters in accordance with Section 12-01-001-0006.1.A.3.f.1.

c. Detached garages and accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in Section 12-01-001-0006.

UPON COMPLETION OF THE STRUCTURE, CERTIFICATION BY A REGISTERED PROFESSIONAL ENGINEER OR SURVEYOR THAT THE REQUIREMENTS OF THIS SECTION HAVE BEEN SATISFIED SHALL BE PROVIDED TO THE FLOODPLAIN ADMINISTRATOR FOR VERIFICATION.

12-01-001-0006.2 STANDARDS FOR STORAGE OF MATERIALS AND EQUIPMENT:

A. The storage or processing of materials that are, in time of flooding, buoyant, flammable, explosive, toxic, or could be injurious to human, animal, or plant life is prohibited IN SPECIAL FLOOD HAZARD AREAS.

B. Storage of other material or equipment may be allowed if not subject to major damage by floods, and if firmly anchored to prevent flotation, or if readily removable from the area within the time available after flood warning.

12-01-001-0006.3 STANDARDS FOR UTILITIES:

- A. All new or replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of flood waters into the system and discharge from systems into flood waters.
- B. On-site waste disposal systems shall be located to avoid impairment to them or contamination from them during flooding.
- C. Waste disposal systems shall not be installed wholly or partially in a regulatory floodway.
- D. All areas within the Floodplain that are disturbed as a result of the construction or maintenance of underground utilities must be restored to pre-construction conditions including, but not limited to, re-seeding, re-vegetating and restoring the same grade.

12-01-001-0006.4 STANDARDS FOR SUBDIVISIONS:

- A. All preliminary subdivision proposals and other proposed development (including proposals for manufactured home parks and subdivisions), GREATER THAN 50 LOTS OR 5 ACRES, shall identify the Special Flood Hazard Areas and the Base Flood Elevation.
- B. A preliminary drainage report is required for all preliminary plat submittals in accordance with the City of Flagstaff Stormwater Management Design Manual. A final drainage report which technically demonstrates compliance with these regulations and the Stormwater Management Design Manual is required to be submitted and accepted prior to approval of subdivision construction plans and recording of the final plat.
- C. All subdivision proposals or other developments must provide BASE FLOOD ELEVATION data.
- D. All final subdivision plats within SPECIAL FLOOD HAZARD AREAS shall show the limits of the base flood, BASE FLOOD ELEVATIONS, and floodway. All final subdivision plans shall provide the minimum lowest floor elevation(s) of proposed structure(s) and pads.
- E. In SPECIAL FLOOD HAZARD AREAS, all final subdivision construction plans shall provide the minimum lowest floor elevations of proposed structures and elevations of the engineered pads. If the site is filled above the base flood, the lowest floor and pad elevations shall be certified by A REGISTERED PROFESSIONAL engineer or surveyor and provided to the Floodplain Administrator. The subdivider must complete a revision of the Flood Insurance Rate Map for any areas filled above the BASE FLOOD ELEVATION.
- F. All subdivision proposals and other proposed development shall be consistent with the need to minimize flood damage.
- G. All subdivision proposals and other proposed development shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize flood damage.
- H. All subdivision proposals and other proposed development shall provide adequate drainage to reduce exposure to flood hazards.
- I. All subdivisions shall provide stormwater facilities in accordance with the City of Flagstaff

12-01-001-0006.5 STANDARDS FOR MANUFACTURED HOMES, MANUFACTURED HOME PARKS AND SUBDIVISIONS, AND RECREATIONAL VEHICLES:

A. All new and replacement manufactured homes, additions to manufactured homes, and recreational vehicles which are left on site for more than 180 days or are not licensed and ready for highway use shall:

1. Be elevated so that the bottom of the structural frame or the lowest point of any attached appliances, whichever is lower, is at or above the REGULATORY FLOOD ELEVATION.
2. Be securely anchored to an adequately anchored foundation system to resist flotation, collapse, or lateral movement capable of resisting forces of at least four thousand eight hundred (4,800) pounds. This requirement is in addition to applicable State and local anchoring requirements to withstand wind forces. One of the following methods shall be used:
 - a. by providing over-the-top to ground anchors at each of the four corners of the manufactured home. Manufactured homes fifty (50) feet or more in length must have two (2) additional ties per side at intermediate locations and manufactured homes less than fifty (50) feet in length must have one (1) additional over-the-top tie per side; or by providing frame ties at each of the four corners of the manufactured home. Manufactured homes fifty (50) feet or more in length must have five (5) additional ties per side, and manufactured homes less than fifty (50) feet in length must have four additional frame ties per side. 44 CFR § 60.3(B)(8).
3. The manufactured home chassis must be supported by reinforced piers or other foundation elements of at least equivalent strength that are no more than thirty-six (36) inches in height above grade and be securely anchored to an adequately anchored foundation system to resist flotation, collapse, and lateral movement.
4. Any additions to a manufactured home must be similarly anchored.

UPON COMPLETION OF INSTALLATION OF THE MANUFACTURED HOME, CERTIFICATION BY A REGISTERED PROFESSIONAL ENGINEER OR SURVEYOR THAT THE ELEVATION REQUIREMENTS OF THIS SECTION HAVE BEEN SATISFIED SHALL BE PROVIDED TO THE FLOODPLAIN ADMINISTRATOR FOR VERIFICATION.

B. Minimum Requirements for Manufactured Home Parks and Manufactured Home Subdivisions:

1. Adequate surface drainage and vehicular access for a manufactured home transport vehicle shall be provided.
2. All manufactured homes shall be placed on pads, lots elevated on compacted fill or pilings so that the bottom of the structural frame or the lowest point on any attached appliances, whichever is lower, is at or above the Regulatory Flood Elevation. If elevated on pilings:
 - a. the lots shall be large enough to permit steps;
 - b. the pilings shall be placed in stable soil no more than ten (10) feet apart; and

c. reinforcement shall be provided for pilings more than six (6) feet above the ground level.

C. No manufactured home, recreational vehicle, new manufactured home park, or enlargement of an existing manufactured home park shall be permitted in the regulatory floodway.

D. Recreational vehicles placed on sites within Zones A, AH, AE and AO must meet the following requirements:

1. be on the site for fewer than 180 consecutive days;
2. be fully licensed and ready for highway use. A recreational vehicle is ready for highway use if it is on wheels or a jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
3. recreational vehicles not meeting the criteria in items 1 and 2 must meet the requirements of Section 12-01-001-0006.5.A.

12-01-001-0006.6 RESERVED FOR FUTURE USE

12-01-001-0006.7 DEVELOPMENT STANDARDS FOR REGULATORY FLOODWAYS:

Located within THE SPECIAL FLOOD HAZARD AREAS established in Section 12-01-001-0004.02 are areas designated as regulatory floodways. The following provisions shall apply to regulatory floodways:

A. The following are prohibited in, on, or over the regulatory floodway unless removed by a FEMA map revision: Encroachments, including fill, new construction, additions to existing structures which increase the building footprint, storage of materials or equipment, manufactured homes, recreational vehicles, or other development are prohibited. Substantial improvements are prohibited within the regulatory floodway unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with standard engineering practice that the proposed substantial improvement would not result in any increase in flood levels within the community during the occurrence of the base flood. DOCUMENTED BY A NO-RISE CERTIFICATE. All new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of Section 12-01-001-0006.

B. Storage of materials that are buoyant, flammable, explosive or injurious to human, animal, plant, fish or other aquatic life is prohibited in, on or over the regulatory floodway.

C. Any solid or hazardous waste disposal facility is prohibited in, on or over the regulatory floodway.

D. Any wastewater treatment facility or pond is prohibited in, on or over the regulatory floodway. New private sewage systems, or additions to existing private sewage systems are prohibited in, on or over the regulatory floodway.

E. Zone A, for which a regulatory floodway has not been delineated, shall be deemed in entirety as regulatory floodway for the purposes of these regulations.

F. Uses having low flood-damage potential and not obstructing flood flows shall be permitted in the regulatory floodway to the extent that they are not prohibited by any other regulation, and

provided they do not require structures, fill or storage of materials and equipment, or anything which will significantly impede or obstruct flood flows. Such uses include:

1. Agricultural uses such as general farming, pasture and forestry but, does not include permanent crops which would constitute an obstruction to flood flows.
2. Functionally dependent uses, industrial/commercial loading areas and parking lots. Overnight parking and unattended vehicles are prohibited in the regulatory floodway.
3. Private and public recreational uses including but not limited to: golf courses, driving ranges, picnic grounds, swimming areas, parks, ball or multi-use fields, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, hiking and horseback trails.
4. Functions that serve the public interest and that will not cause a rise in the floodway elevation. Such uses include but are not limited to: water conservation, power and water quality service facilities and related works; remedial or corrective actions; environmental restoration; flood control facilities and related works; public roadways and bridges; fish and wildlife enhancement activities; emergency action assistance; public health assistance; utility transmission lines, pipelines, and water monitoring devices.

12-01-001-0006.8 MISCELLANEOUS PROVISIONS:

A. The Floodplain Administrator shall review and approve all development permits before issuance to ensure compliance with the provisions of these regulations.

B. Lateral additions to existing structures must meet all requirements of this Ordinance. If the Lateral Addition constitutes a Substantial Improvement to the existing structure then both the addition and the existing structure must meet all requirements of this Ordinance. The exception to this is for lateral additions located in the flood fringe, if the Lateral Addition is connected to the existing structure by only one doorway, not exceeding 36 inches in width, and minimal finishing is done to the common wall.

C. Substantial improvements to existing structures shall be counted on a cumulative basis for the 10 years prior to the date of application for construction. Additions to existing structures shall be included in the determination of a substantial improvement to the original structure. The property owner or permit applicant may have the option of having the structure independently appraised, the cost of which shall be assumed by the property owner or permit applicant, to be used as the market value. A copy of the certified appraisal must be submitted to the Floodplain Administrator.

D. The development of all land within the City of Flagstaff must include provisions for the management of stormwater runoff from the property which is to be developed. This management shall consist of stormwater storage facilities or other mitigation measures for rainfall events up to and including the one-hundred year event, in accordance with the City of Flagstaff Stormwater Management Design Manual.

E. No street shall be used as a major carrier of stormwater from adjacent lands in lieu of natural washes, man-made channel, or storm drains. Streets shall be used for local runoff only. In all cases the flow of water from public streets shall be confined in public rights-of-way or drainage easements.

F. All lots, structures, etc. within a development shall be accessible over terrain which can be traversed by conventional motor vehicles from the boundary of that development during the one-hundred year flood. Boundary shall include any adjacent street(s). At least one access route shall be accessible with a maximum water depth of one foot over the top of the access route or road during the one-hundred year flood.

G. Parking lots are permitted within the floodplain provided that:

1. All vehicles are fully licensed, ready for highway use, and are not unattended. The term "unattended" shall mean that the owner or authorized driver cannot reasonably be expected to be available to remove the vehicle before flooding occurs.
2. Any parking lot subject to flooding shall have a prominent sign posted at each entrance stating "Warning, parking lot subject to flooding".
3. Overnight parking is prohibited in the regulatory floodway and shall be limited to flood fringe areas where the flooding does not exceed one foot of depth during the one-hundred year flood.

H. An erosion hazard and building setback from the top of the channel bank is required for all new development to create a buffer and to provide access to the channel for possible maintenance and improvements work. This buffer shall be designated by the Floodplain Administrator according to the flood-related erosion hazard and erosion rates in relation to the anticipated "useful life" of structures, and depending upon the geologic, hydrologic, topographic, and climatic characteristics of the land. The minimum setback shall be ten (10) feet. The buffer may be used for suitable open space purposes, such as for agriculture, forestry, outdoor recreation, wildlife habitat areas, landscaping and for other activities using temporary and portable structures only.

I. A waiver to the setback requirements may be granted by the Floodplain Administrator if it can be demonstrated that adequate erosion and flow velocity protection can and will be constructed and maintained, and vehicular maintenance access along the top of the channel bank is not required. All plans for erosion and flow velocity protection must be prepared by A REGISTERED PROFESSIONAL engineer and reviewed and approved by the Floodplain Administrator.

J. No new critical facility shall be constructed within the 100 or 500-year floodplain.

K. No person shall change the use of an existing structure from a nonresidential use to a residential use without compliance with the provisions of these regulations.

L. The design and evaluation of all new floodplain and stormwater management facilities shall be in accordance with the policies and design criteria set forth in the City of Flagstaff Stormwater Management Design Manual.

M. Private Drainage Infrastructure that was required to be constructed as a condition of development, such as detention basins, Low Impact Development (LID) facilities, culverts and open channels, shall be maintained by the private property owner, or responsible party(s), to ensure proper function pursuant to the approved design.

N. In order to provide for properly sized drainage infrastructure and to minimize the need for

the upsizing of drainage infrastructure in the future, drainage infrastructure shall be sized according to the best available hydrologic and hydraulic data including, but not limited to Drainage Master Plans, future conditions modeling and other drainage studies as may be approved by the City.

12-01-001-0007 VARIANCE PROCEDURE

12-01-001-0007.1 APPEAL AND VARIANCE BOARD

A. The Floodplain Board (the "Board") of the City of Flagstaff shall hear and decide appeals and requests for variances from the requirements of these regulations.

B. The Board shall hear and decide appeals 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 these regulations.

~~C. The Board shall hear and decide variance requests from the provisions of these regulations.~~

~~C. D.~~ Applications for an appeal or variance shall be made on forms and in accordance with procedures furnished by the Floodplain Administrator. Persons requesting an appeal or variance shall pay a fee in the amount of three hundred dollars (\$300.00). Upon receipt of the appeal/variance request, fee, and all required information, the Floodplain Administrator shall schedule the request before the Board within thirty (30) calendar days.

~~D. E.~~ The Board shall conduct hearings on all appeals and variance requests and all hearings shall be open to the public. Notice of the public hearing shall be published in a newspaper of general circulation a minimum of fifteen (15) days prior to the hearing.

~~E. F.~~ The Board shall render a written decision on an appeal or variance within thirty (30) calendar days from the date of the public hearing. When additional information is required by the Board, the Board shall render a decision within thirty (30) calendar days from receipt of such information.

~~F. G.~~ In ~~passing~~ **CONSIDERING** ~~upon~~ such applications, the Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of these regulations, and:

1. The danger that materials may be swept onto other lands to the injury of others;
2. The danger of life and property due to flooding or erosion damage;
3. The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;
4. The importance of the services provided by the proposed facility to the community;
5. The necessity to the facility of a waterfront location, where applicable;
6. The availability of alternative locations for the proposed use which are not subject to flooding or erosion damage;

7. The compatibility of the proposed use with existing and anticipated development;
8. The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;
9. The safety of access to the property in time of flood for ordinary and emergency vehicles;
10. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site; and,
11. The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water system, and streets and bridges.

G.H. The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance and report such variances issued in its biennial report submitted to the Federal Emergency Management Agency.

12-01-001-0007.2 VARIANCES

A. NATURE OF VARIANCES

The variance criteria set forth in these regulations are based on the general principle of zoning law that variances pertain to a piece of property and are not personal in nature. A variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this Ordinance would create an exceptional hardship to the applicant or the surrounding properties. Mere economic or financial hardship alone is not exceptional. The characteristics must be unique to the property and not be shared by adjacent parcels. The unique characteristic must pertain to the land itself, not the structure, its inhabitants, or the property owners.

It is the duty of the Floodplain Board to help protect its citizens from flooding. This need is so compelling and the implications of the cost of insuring a structure built below the **REGULATORY FLOOD ELEVATION** are so serious that variances from the flood elevation or from other requirements in the flood ordinance are quite rare. The long-term goal of preventing and reducing flood loss and damage can only be met if variances are strictly limited. Therefore, the variance guidelines provided in this ordinance are more detailed and contain multiple provisions that must be met before a variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a variance are more appropriate.

B. CONDITIONS FOR VARIANCES

1. Variances may be issued for the repair, rehabilitation, or restoration of structures listed in the National Register of Historic Places or the State Inventory of Historic Places, 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.
2. Variances shall not be issued within any designated floodway if any increase in flood levels during the base flood discharge would result.

3. Variances shall only be issued upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief.
4. Variances shall only be issued upon:
 - a. A showing of good and sufficient cause;
 - b. A determination that failure to grant the variance would result in exceptional hardship to the applicant;
 - c. A showing that the use cannot perform its intended purpose unless it is located or carried out in close proximity to water. This includes only facilities defined in Section 12-01-001-0003 of these regulations in the definition of "Functionally Dependent Use"; and
 - d. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of, the public, or conflict with existing local laws or ordinances.
5. Generally, 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 items 12-01-001-0005 and 12-01-001-0006 have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.
6. Upon consideration of the factors of Section 12-01-001-0007.1 and the purposes of these regulations, the Floodplain Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of these regulations.
7. Any applicant to whom a variance is granted shall be given written notice over the signature of Floodplain Administrator that:
 - a. The issuance of a variance to construct a structure below the ~~base~~ **REGULATORY** flood level will result in increased premium rates for flood insurance coverage; and
 - b. Such construction below the base flood level increases risks to life and property.

Such notification shall be maintained with a record of all variance actions as required in Paragraph 12-1-7-1.8. of these regulations. ~~Such notice will also state that the land upon which the variance is granted shall be ineligible for exchange of land pursuant to any flood relocation and land exchange program~~ A copy of the notice shall be recorded by the Board in the Office of the Coconino County Recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land.

8. If the Floodplain Board has cause to believe, after approval of a variance, that any stipulations or conditions may have been violated, the Floodplain Board may set a hearing for the purpose of determining to revoke the variance for such violation. The Floodplain Board may revoke the variance for finding a violation of the stipulations or conditions or it may grant a limited time in which to correct the violation in order to avoid revocation of the variance.

12-01-001-0007.3 APPEALS

A person may appeal to the Board for a judgment on the interpretation of the provisions of these regulations 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 these regulations.

12-01-001-0009 AMENDMENTS

The provisions of these regulations may, from time to time, be amended, supplemented, changed or repealed, as provided in the Arizona Revised Statutes. However, no such action may be taken until a public hearing in relation thereto has been held, at which time parties in interest and citizens shall have an opportunity to be heard. At least fifteen (15) days notice of the time and place of such hearing shall be published in a newspaper of general circulation.

A full text of any proposed amendments to these regulations shall be available for inspection by the public at the office of the Floodplain Administrator at least fifteen (15) days prior to the date of the amendment hearing.

12-01-001-0010 SEVERABILITY:

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

12-01-001-0011 RESERVED FOR FUTURE USE

12-01-001-0012 RESERVED FOR FUTURE USE