
FLOODPLAIN MANAGEMENT
ORDINANCE

for

City of Maricopa

6/20/2023

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SECTION 1.0
STATUTORY AUTHORIZATION, FINDINGS OF FACT, PURPOSE, AND METHODS

1.1 STATUTORY AUTHORIZATION

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 City of Maricopa, Arizona, does ordain as follows:

1.2 FINDINGS OF FACT

- A. The Special Flood Hazard Areas of City of Maricopa 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 flood loss.

1.3 STATEMENT OF PURPOSE

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

- A. Protect human life and health;
- B. Minimize expenditure of public money for costly flood control projects;
- C. Minimize the need for rescue and relief efforts associated with flooding generally undertaken at the expense of the public;
- D. Minimize prolonged business interruptions;
- E. Minimize damage to public facilities and utilities such as water mains, gas mains, electric lines, telephone lines, sewer lines, streets, and bridges located in Special Flood Hazard Areas;
- F. Help maintain a stable tax base by providing for the sound use and development of Special Flood Hazard Areas so as to minimize blight areas caused by flooding;
- G. Participate in and maintain eligibility for flood insurance and disaster relief.

1.4 METHODS OF REDUCING FLOOD LOSSES

In order to accomplish its purposes, this Ordinance includes methods and provisions to:

- A. Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards which result in damaging increases in erosion, flood heights, or velocities;
- B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- C. Control the alteration of natural floodplains, stream channels, and natural protective barriers which help accommodate or channel floodwaters;
- D. Control filling, grading, dredging, and other development which may increase flood damage; and

- E. Prevent or regulate the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

SECTION 2.0 **DEFINITIONS**

Accessory structure: 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, having a typical footprint of about 600 square feet in area and where contents stored in wet floodproofed structures will get wet during flooding.

Appeal: A request for a review of the Floodplain Administrator's interpretation of any provision of this Ordinance or a request for a variance.

Area of shallow flooding: A designated Zone AO, AH, AR/AO, or AR/AH on a community's Flood Insurance Rate Map (FIRM) with a one percent or greater annual chance of flooding to an average depth of one to three feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Base flood: A flood which has a one percent 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.

Basement: Any area of the building having its floor sub-grade - i.e., below ground level - on all sides.

Building: See "Structure."

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

Development: Any man-made change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, or storage of equipment or materials.

Elevation Certificate: 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: The advance or infringement of uses, plant growth, fill, excavation, buildings, permanent structures, or development into a floodplain, which may impede or alter the flow capacity of a floodplain.

Erosion: The process of the gradual wearing away of landmasses. This peril is not, per se, covered under the National Flood Insurance Program.

Flood or flooding: A general and temporary condition of partial or complete inundation of normally dry land areas from: (1) the overflow of floodwaters; (2) the unusual and rapid accumulation or runoff of surface waters from any source; and/or (3) 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 Insurance Rate Map (FIRM): The official map of a community, on which the Federal Emergency Management Agency has delineated both the Special Flood Hazard Areas and the risk premium zones applicable to the community.

Flood Insurance Study (FIS): The official report provided by the Federal Emergency Management Agency that includes flood profiles, Flood Insurance Rate Maps, and the water surface elevation of the base flood.

Floodplain or flood-prone area: Any land area susceptible to being inundated by water from any source. See "Flood or flooding."

Floodplain Administrator: The community official designated by title to administer and enforce the floodplain management regulations.

Floodplain Board: City Council of City of Maricopa, at such times as they are engaged in the enforcement of this Ordinance.

Floodplain management: 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: This Ordinance and other zoning ordinances, subdivision regulations, building codes, health regulations, special purpose ordinances (such as grading and erosion control), and other application of police power which control development in flood-prone areas. This term describes federal, state or local regulations in any combination thereof, which provide standards for preventing and reducing flood loss and damage.

Floodplain Use Permit (FUP): A permit (license) issued by the City allowing development to occur within the one percent (1%) annual chance floodplain within the area of jurisdiction.

Floodproofing: Any combination of structural and nonstructural additions, changes, or adjustments to nonresidential structures which reduce or eliminate risk of flood damage to real estate or improved real property, water and sanitary facilities, structures, and their contents by means other than elevation.

Flood-related erosion: 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.

Floodway: 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. Also referred to as "Regulatory Floodway."

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

Governing body: The local governing unit that is empowered to adopt and implement regulations to provide for the public health, safety, and general welfare of its citizenry.

Hardship: As related to Section 6.0 of this Ordinance. The City of Maricopa requires that the hardship be 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.

Highest Adjacent Grade (HAG): The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

Historic structure: Any structure that is:

1. 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;
2. 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;
3. Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of Interior; or
4. Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either:
 - a. By an approved state program as determined by the Secretary of the Interior or
 - b. Directly by the Secretary of the Interior in states without approved programs.

Lowest floor: The lowest floor of the lowest enclosed area including the basement, see “Basement”. An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access, or storage in an area other than a basement area is not considered 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 Ordinance.

Manufactured Home: A structure, transportable in one or more sections, which is built on a permanent chassis and is designed for use with or without a permanent foundation when attached to the required utilities. The term "manufactured home" does not include a "recreational vehicle."

Manufactured Home park or subdivision: A parcel (or contiguous parcels) of land divided into two or more manufactured home lots for rent or sale.

Market value: Replacement cost of a structure less depreciation since construction.

Mean sea level: 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.

New construction: For the purposes of determining insurance rates, structures for which the “start of construction” commenced on or after the effective date of an initial Flood Insurance Rate Map 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.

Obstruction: Including, but not limited to, any dam, wall, wharf, embankment, levee, dike, pile, abutment, protection, excavation, channelization, bridge, conduit, culvert, building, wire, fence, rock, gravel, refuse, fill, structure, vegetation, or other material in, along, across, or projecting into any 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 or 100-year flood: A common name for the flood having a one percent chance of being equaled or exceeded in any given year. See "Base flood."

Person: An individual or the individual’s agent, a firm, partnership, association, corporation, or an agent of the aforementioned groups, or this state, its agencies, or political subdivisions.

Recreational Vehicle: A vehicle which is:

1. Built on a single chassis;
2. 400 square feet or less when measured at the largest horizontal projection;

3. Designed to be self-propelled or permanently towable by a light-duty truck; and
4. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel, or seasonal use.

Regulatory Flood Elevation (RFE): An elevation one foot above the Base Flood Elevation.

Regulatory floodway: 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.

Riverine: Relating to, formed by, or resembling a river (including tributaries), stream, brook, etc.

Special Flood Hazard Area: An area in the floodplain subject to a 1 percent or greater chance of flooding in any given year. It is shown on a Flood Insurance Rate Map as Zone A, AO, AE, AH, AR, or A99.

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 from the date of the permit. 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, foundations, or the erection of temporary forms; nor does it include the installation on the property of accessory buildings, such as garages or sheds, not occupied as dwelling units or not part of the main structure. For a substantial improvement, the actual start of construction means the first alteration of any wall, ceiling, floor, or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

Structure: A walled and roofed building that is principally above ground; this includes a gas or liquid storage tank or a manufactured home.

Substantial Damage: Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

Substantial Improvement: Any reconstruction, rehabilitation, addition, or other improvement to a structure, the total 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:

1. Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions; or
2. Any alteration of a "historic structure", provided that the alteration will not preclude the structure's continued designation as a "historic structure".

Variance: A grant of relief from the requirements of this Ordinance which permits construction or other uses of property in a manner that would otherwise be prohibited by this Ordinance.

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

Water surface elevation: The height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929, North American Vertical Datum (NAVD) of 1988, or other datum, of floods of various magnitudes and frequencies in the

floodplains of coastal or riverine areas.

Watercourse: 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.

Zone A: No Base Flood Elevations determined.

Zone AE: Base Flood Elevations determined.

Zone AH: Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

Zone AO: Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

Zone AR: Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

Zone A99: Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.

Zone D: Areas in which flood hazards are undetermined, but possible.

Zone X (unshaded): Areas determined to be outside the 0.2% annual chance floodplain.

Zone X (shaded): Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

SECTION 3.0
GENERAL PROVISIONS

3.1 LANDS TO WHICH THIS ORDINANCE APPLIES

This Ordinance shall apply to all Special Flood Hazard Areas within the corporate limits of the City of Maricopa.

3.2 BASIS FOR ESTABLISHING SPECIAL FLOOD HAZARD AREAS

The Special Flood Hazard Areas identified by the Federal Emergency Management Agency in a scientific and engineering report entitled for "Flood Insurance Study, Pinal County and Incorporated Areas" dated December 4, 2007, with accompanying Flood Insurance Rate Maps (FIRMs) dated December 4, 2007, and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this Ordinance. This FIS and attendant mapping are the minimum area of applicability of this Ordinance 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. The FIS and FIRM panels are on file at the Public Works office located at 45755 West Edison Road, Suite 100, Maricopa, AZ 85139.

3.3 COMPLIANCE

All development of land, construction of residential, commercial, or industrial structures, or future development within delineated floodplains is subject to the terms of this Ordinance and other applicable regulations.

3.4 ABROGATION AND GREATER RESTRICTIONS

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

3.5 INTERPRETATION

In the interpretation and application of this Ordinance, 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.

3.6 DISCLAIMER OF LIABILITY

The degree of flood protection required by this Ordinance 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 Area or uses permitted within such areas will be free from flooding or flood damages. This Ordinance shall not create liability on the part of the City of Maricopa, any officer or employee thereof,

the State of Arizona, or the Federal Emergency Management Agency, for any flood damages that result from reliance on this Ordinance or any administrative decision lawfully made hereunder.

3.7 STATUTORY EXCEPTIONS

- A. In accordance with A.R.S. § 48-3609(I), unless expressly provided, this and any regulation adopted pursuant to this article does 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 months, or destroyed to the extent of 50 percent of its market value, as determined by a competent appraiser, any further use shall comply with this article and regulations of the City of Maricopa;
 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 50 percent or more shall be either floodproofed or elevated to or above the Regulatory Flood Elevation;
 3. Reasonable repair of structures constructed with the written authorization required by A.R.S. § 48-3613;
 4. Facilities constructed or installed pursuant to a Certificate of Environmental Compatibility issued pursuant to A.R.S. Title 40, Chapter 2, Article 6.2; and
- 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 for review and comment pursuant to A.R.S. § 48-3613(C):
1. The construction of bridges, culverts, dikes, and other structures necessary for the construction of public highways, roads, and streets intersecting or crossing a watercourse;
 2. The construction of storage dams for watering livestock or wildlife, 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;
 3. 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 that will divert, retard, or obstruct the flow of waters in any watercourse from complying with and acquiring authorization from the Floodplain Board pursuant to regulations adopted by the Floodplain Board under this article;
 4. Other construction upon determination by the Floodplain Board that written authorization is unnecessary;
 5. 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;
 6. 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; and
 7. 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** 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.

3.8 VIOLATIONS

- A. 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 A.R.S. § 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 A.R.S. § 48-3613.
- B. A person who violates Section 3.8A is guilty of a class 2 misdemeanor.
- C. A person who violates this Ordinance may be assessed a civil penalty not to exceed the fine chargeable for a class 2 misdemeanor or, by agreement with the person in violation, a non-monetary penalty that serves the purposes of the community. Each day the violation continues constitutes a separate violation.
- D. A person who without written authorization damages or interferes with a facility that is owned, operated, or otherwise under the jurisdiction of the community is liable for both of the following:
 - 1. Any actual damages to persons or property that is caused by the damage or interference.
 - 2. Payment of costs to the community for remediating the damage or interference.

3.9 ABATEMENT OF VIOLATIONS

Within 30 days of discovery of a violation of this Ordinance, the Floodplain Administrator shall submit a report to the Floodplain Board which shall include all information available to the Floodplain Administrator which is pertinent to said violation. Within 30 days of receipt of this report, the Floodplain Board shall either:

- A. Take any necessary action to effect the abatement of such violation; or
- B. Issue a variance to this Ordinance in accordance with the provisions of Section 6.0 herein; or
- C. Order the owner of the property upon which the violation exists to provide whatever additional information may be required for their determination. Such information must be provided to the Floodplain Administrator within 30 days of such order and the Floodplain Administrator shall submit an amended report to the Floodplain Board within 30 days. At the next regularly scheduled public meeting, the Floodplain Board shall either order the abatement of said violation or they shall grant a variance in accordance with the provisions of Section 6.0 herein; or
- D. Submit to the Federal Emergency Management Agency a declaration for denial of insurance, stating that the property is in violation of a cited state or local law, regulation or ordinance, pursuant to Section 1316 of the National Flood Insurance Act of 1968 as amended.

3.10 DECLARATION OF PUBLIC NUISANCE

All development located or maintained within any Special Flood Hazard Area since August 8, 1973, in violation of floodplain regulations established by the Board and without written authorization from the Board is a public nuisance per se and may be abated, prevented, or restrained by action of this state or any of its political subdivisions.

3.11 SEVERABILITY

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

SECTION 4.0
ADMINISTRATION

4.1 DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR

The City Manager or designee is hereby designated to administer, implement, and enforce this Ordinance by granting or denying permits in accordance with its provisions.

4.2 DUTIES AND RESPONSIBILITIES OF THE FLOODPLAIN ADMINISTRATOR

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

4.2.1 PERMIT REVIEW

Review all floodplain use permits to determine that:

- A. The permit requirements of this Ordinance have been satisfied;
- B. All other required state and federal permits have been obtained;
- C. The site is reasonably safe from flooding;
- D. In areas where a floodway has not been designated, the proposed development does not adversely affect the carrying capacity of areas where Base Flood Elevations have been determined.

For the purposes of this Ordinance, "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 more than one foot at any point.

4.2.2 SUBSTANTIAL IMPROVEMENT AND SUBSTANTIAL DAMAGE ASSESSMENTS

Review all development permits for improvements and/or damages to existing structures to determine if the application of the substantial improvement rules apply, including establishing a definition of market value determination and verifying that the estimated improvement and/or repair costs are less than 50% of the market value of the structure.

4.2.3 USE OF OTHER BASE FLOOD DATA

When Base Flood Elevation data has not been provided in accordance with Section 3.2, the Floodplain Administrator shall obtain, review, and reasonably utilize any Base Flood Elevation data available from a federal, state, or other source, in order to administer Section 5.0. Any such information shall be consistent with the requirements of the Federal Emergency Management Agency and the Director of the Arizona Department of Water Resources and may be submitted to the Floodplain Board for adoption.

4.2.4 OBTAIN AND MAINTAIN FOR PUBLIC INSPECTION

Obtain and maintain the following for public inspection and make available as needed:

- A. Certification required by Section 5.1.3.1 and Section 5.5 (lowest floor elevations, bottom of the structural frame, and utilities);
- B. Certification required by Section 5.1.3.2 (lowest floor elevations or floodproofing of nonresidential structures and utilities);
- C. Certification required by Section 5.1.3.5 (flood vents);
- D. Certification of elevation required by Section 5.4.A.2. (subdivisions and other proposed development standards);

- E. Certification required by Section 5.7.A (floodway encroachments);
- F. Records of all variance actions, including justification for their issuance.
- G. Obtain and maintain improvement and damage calculations required in Section 4.2.2

4.2.5 NOTIFICATION TO OTHER ENTITIES

- A. Whenever a watercourse is to be altered or relocated:
 - 1. 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 through appropriate notification means; and
 - 2. Assure that the flood carrying capacity of the altered or relocated portion of said watercourse be maintained.
- B. 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 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 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 delineation shall be done according to the criteria adopted by the Director of the Arizona Department of Water Resources.
- C. Corporate Boundary Changes:
 - 1. Notify the Federal Emergency Management Agency of acquisition by means of annexation, incorporation, or otherwise of additional areas of jurisdiction.

4.2.6 MAP DETERMINATIONS

Make interpretations, where needed, as to the exact location of the boundaries of the Special Flood Hazard Area (e.g., where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 6.0.

4.2.7 REMEDIAL ACTIONS

Take actions on violations of this Ordinance as required in Section 3.9 herein.

4.3 ESTABLISHMENT OF FLOODPLAIN USE PERMIT

A Floodplain Use Permit shall be obtained before construction or development begins, including placement of manufactured homes, within any Special Flood Hazard Area established in Section 3.2. Application for a Floodplain Use Permit shall be made on forms furnished by the Floodplain Administrator and may include, but not be limited to, plans in duplicate drawn to scale showing the nature, location, dimensions, and elevation of

the area in question, existing or proposed structures, fill, storage of materials, drainage facilities, and the location of the foregoing. Specifically, the following information is required:

- A.** 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 grade and proposed elevation of lowest floor of all structures;
- B.** Proposed elevation in relation to mean sea level to which any non-residential structure will be floodproofed;
- C.** Certification by a registered professional engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 5.1.3.2;
- D.** Base Flood Elevation data for subdivision proposals or other development greater than 50 lots or 5 acres, whichever is the lesser; and
- E.** Description of the extent to which any watercourse will be altered or relocated as a result of proposed development.

SECTION 5.0
PROVISIONS FOR FLOOD HAZARD REDUCTION

5.1 STANDARDS OF CONSTRUCTION

In all Special Flood Hazard Areas, the following standards are required:

5.1.1 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 Section 5.5.B.

5.1.2 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; and
- C. Within Zones AH or AO, adequate drainage paths shall be constructed around structures on slopes to guide floodwaters around and away from proposed structures.

5.1.3 Elevation and Floodproofing

5.1.3.1 Residential Construction

Residential construction, new, or substantial improvement, shall have the lowest floor, including basement, elevated to or above the Regulatory Flood Elevation.

- A. In a Zone AO, the Base Flood Elevation is determined from the FIRM panel. If unspecified, the required elevation is at minimum two (2) feet above highest adjacent grade.
- B. In a Zone A where the Base Flood Elevation has not been determined, the Base Flood Elevation is determined locally by the criteria set out in Section 4.2.3.
- C. 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 Section 5.1.3.5 (A) or (B).

Upon completion of the structure, certification by a registered professional engineer or surveyor that the elevation requirements of the lowest floor, including basement, of this section have been satisfied shall be provided to the Floodplain Administrator for verification.

5.1.3.2 Nonresidential Construction (Commercial Construction or Industrial Construction)

Nonresidential construction, new, or substantial improvement, shall have the lowest floor either elevated to conform with Section 5.1.3.1(A), (B), or (C) as appropriate,

Or, together with attendant utility and sanitary facilities,

- A. Be floodproofed below the elevation recommended under Section 5.1.3.1(A), (B), or (C) as appropriate so that the structure is watertight with walls substantially impermeable to the passage of water; and
- B. Have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.

Upon completion of the structure, certification by a registered professional engineer or surveyor that the elevation requirements of the lowest floor, including basement, of this section have been satisfied shall be provided to the Floodplain Administrator for verification; **or** certification by a registered professional engineer or architect that the floodproofing standards of this section are satisfied shall be provided to the Floodplain Administrator for verification.

5.1.3.3 Manufactured Homes

Manufactured homes shall meet the standards in Section 5.5.

5.1.3.4 Accessory Structures (Detached Garages & Storage Structures)

Accessory structures up to 600 square feet, used solely for parking of vehicles or storage may be constructed such that the floor is below the Regulatory Flood Elevation, provided the structure is designed and constructed in accordance with the following requirements:

- A. Use of the accessory structure must be limited to parking of vehicles or 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 machinery or equipment servicing the accessory structure must be elevated or floodproofed to or above the Regulatory Flood Elevation;
- E. The accessory structure must comply with floodway encroachment provisions in Section 5.7 ; and
- F. The accessory structure must be designed to allow for the automatic entry and exit of flood waters in accordance with Section 5.1.3.5 (A) or (B).

Detached garages, storage structures, and other accessory structures not meeting the above standards must be constructed in accordance with all applicable standards in Section 5.1.3.1(A), (B), or (C) as appropriate.

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.

5.1.3.5 Flood Openings

All new construction and substantial improvement with fully enclosed areas below the lowest floor (excluding basements) that are usable solely for parking of vehicles, building access, or storage, and which are subject to flooding, shall be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for the automatic entry

and exit of floodwater. Designs for meeting this requirement must meet or exceed the following criteria:

- A. For non-engineered openings:
 - 1. Have a minimum of two openings, on different sides of each enclosed area, having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;
 - 2. The bottom of all openings shall be no higher than one-foot above grade;
 - 3. Openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwater; or
- B. For engineered openings:
 - 1. 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.
 - 2. 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.

5.1.3.6 Machinery and Service Equipment

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

5.2 STANDARDS FOR STORAGE OF MATERIALS AND EQUIPMENT

- A. The storage or processing of materials that could be injurious to human, animal, or plant life if released due to damage from flooding is prohibited in Special Flood Hazard Areas.
- B. Storage of other material or equipment may be allowed if not subject to damage by floods and if firmly anchored to prevent flotation or if readily removable from the area within the time available after flood warning

5.3 STANDARDS FOR WATER SUPPLY AND WASTE DISPOSAL SYSTEMS

- 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.

5.4 ADDITIONAL DEVELOPMENT STANDARDS, INCLUDING SUBDIVISIONS

- A. All new subdivision proposals and other proposed development (including proposals for manufactured home parks and subdivisions), greater than 50 lots or 5 acres, whichever is the lesser, shall:
 - 1. Identify the Special Flood Hazard Area and the Base Flood Elevation; and

2. Identify on the final plans the elevation(s) of the proposed structure(s) and pads. If the site is filled above the Base Flood Elevation, the lowest floor and finished grade elevations shall be certified by a registered professional engineer or surveyor and provided to the Floodplain Administrator.
- B. All subdivision proposals and other proposed development shall be consistent with the need to minimize flood damage.
 - C. 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.
 - D. All subdivision proposals and other proposed development shall provide adequate drainage to reduce exposure to flood hazards.

5.5 STANDARDS FOR MANUFACTURED HOMES

All manufactured homes that are placed on site or substantially improved shall:

- A. Be elevated to conform with Section 5.1.3.1(A), (B), or (C) as appropriate 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; and
- B. Be securely anchored to an adequately anchored foundation system to resist flotation, collapse, or lateral movement. Methods of anchoring may include, but are not to be limited to, use of over-the-top or frame ties to ground anchors. This requirement is in addition to applicable state and local anchoring requirements for resisting wind forces.

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.

5.6 STANDARDS FOR RECREATIONAL VEHICLES

All Recreational Vehicles placed on site shall:

- A. Be on site for fewer than 180 consecutive days,
- B. Be fully licensed and ready for highway use. A Recreational Vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick disconnect type utilities and security devices, and has no permanently attached additions; or
- C. Meet the permit requirements of Section 4.0 of this Ordinance and the elevation and anchoring requirements for manufactured homes in Section 5.5.

5.7 FLOODWAYS

Located within the Special Flood Hazard Areas established in Section 3.2 are areas designated as floodways. Since the floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris and potential projectiles and can potentially cause erosion, the following provisions apply:

- A. Prohibit encroachments including fill, new construction, substantial improvements, and other development, unless certification by a registered professional engineer or architect is provided demonstrating that encroachments shall not result in any increase in flood levels during the occurrence of the base flood discharge.
- B. If Section 5.7 is satisfied, all new construction and substantial improvements shall comply with all other applicable flood hazard reduction provisions of Section 5.0.

SECTION 6.0
VARIANCE PROCEDURE

6.1 NATURE OF VARIANCES

The variance criteria set forth in this section of this Ordinance is based on the general principle of zoning laws 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 property owners. 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 to the structure, its inhabitants, or the property owners.

It is the duty of the City of Maricopa 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 this 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.

6.2 FLOODPLAIN BOARD

- A. The Floodplain 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 this Ordinance.
- B. In considering such applications, the Floodplain Board shall consider all technical evaluations, relevant factors, standards specified in other sections of this Ordinance, 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, streets, and bridges.
- C. Upon consideration of the factors of Section 6.2(B) and the purposes of this Ordinance, the Floodplain

Board may attach such conditions to the granting of variances as it deems necessary to further the purposes of this Ordinance.

- D. Any applicant to whom a variance is granted shall be given written notice over the signature of a community official that:
 - 1. The issuance of a variance to construct a structure below the Regulatory Flood Elevation will result in increased premium rates for flood insurance up to amounts as high as \$25 for \$100 of insurance coverage, and
 - 2. Such construction below the Regulatory Flood Elevation increases risks to life and property;
- E. The Floodplain Administrator shall maintain a record of all variance actions, including justification for their issuance.

6.3 CONDITIONS FOR VARIANCES

- A. Variances shall only be issued:
 - 1. Upon 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, victimization of the public, or conflict with existing local laws or ordinances;
 - 2. 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 structures' continued designation as a historic structure and the variance is the minimum necessary to preserve the historic character and design of the structure;
 - 3. Upon a determination that the variance is the minimum necessary, considering the flood hazard, to afford relief;
 - 4. Upon a showing of good and sufficient cause;
 - 5. Upon a determination that failure to grant the variance would result in exceptional hardship to the applicant;
 - 6. Upon 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 2.0 of this Ordinance in the definition of "Functionally Dependent Use."
- B. Variances shall not be issued within any floodway if any increase in the Base Flood Elevation would result.
- C. 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 Regulatory Flood Elevation, provided the procedures of Sections 4.0 and 5.0 of this Ordinance have been fully considered. As the lot size increases beyond one-half acre, the technical justification required for issuing the variance increases.