
**CHAPTER 14.00
FLOOD PLAIN AND EROSION HAZARD MANAGEMENT**

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14.01 GENERAL INFORMATION

14.01.01 STATUTORY AUTHORIZATION

In A.R.S. § 48-3610, the Arizona State Legislature enabled the Town of Sahuarita to adopt regulations in conformance with A.R.S. § 48-3603 designed to promote the public health, safety and general welfare of its citizenry. Therefore, the Town Council of the Town of Sahuarita, Arizona, does ordain as follows:

14.01.02 FINDINGS OF FACT

- A. The flood hazard areas of the Town of Sahuarita 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. Flood losses may be exacerbated by the cumulative effects of obstructions to flow, inadequate anchoring of structures and encroachment into the floodplain. Uses that are inadequately flood proofed, elevated or otherwise protected from flood damage, also contribute to the flood loss.

14.01.03 STATEMENT OF PURPOSE

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

- A. To protect human life and health;
- B. To minimize expenditure of public money for costly flood control projects;
- C. To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
- D. To minimize prolonged business interruptions;
- E. To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard;
- F. To help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize blight areas caused by flooding;
- G. To ensure that potential buyers are notified that property is in an area of special flood hazard;
- H. To ensure that those who occupy the areas of special flood hazard assume responsibility for their actions; and
- I. To maintain eligibility for disaster relief.

14.01.04 METHODS OF REDUCING FLOOD LOSSES

To accomplish its purposes, this Title 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 that will unnaturally divert flood waters or which may increase flood hazards in other areas.

14.02 ABBREVIATIONS AND DEFINITIONS

14.02.01 ABBREVIATIONS

The following common abbreviations are used throughout this Title:

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| ADWR | Arizona Department of Water Resources |
| BFE | Base Flood Elevation |
| CFS | Cubic Feet per Second |
| CLOMR | Conditional Letter of Map Revision |
| EHS(L) | Erosion Hazard Setback or Erosion Hazard Setback limit |
| FEMA | Federal Emergency Management Agency |
| FFE | Finished Floor Elevation |
| FIA | Federal Insurance Administration |
| FIS | Flood Insurance Study |
| FIRM | Flood Insurance Rate Map |
| LOMR | Letter of Map Revision |
| NGVD | National Geodetic Vertical Datum (of 1929) |
| NAVD | North American Vertical Datum (of 1988) |
| SFHA | Special Flood Hazard Area |

14.02.02 DEFINITIONS

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

All-Weather Access. Access considered traversable by normal passenger vehicles, defined as a permanent, durable material with adequate protection against scour and erosion and having a depth of water no more than 12 inches above the roadway surface during a Base Flood.

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

Area of Shallow Flooding. A designated AO or AH Zone on a community's 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 or where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Base Flood. The flood having a one percent chance of being equaled or exceeded in any given year.

Base Flood Elevation (BFE). The Water Surface Elevation associated with the Base Flood.

Basement. Any area of a building having its floor sub-grade (below ground level) on all sides.

Building. See "Structure".

Conditions and Restrictions. Standard requirements which are placed on a parcel of land, the development permit applicant and the parcel owner by the Floodplain Administrator as a condition of the applicant's or owner's use of the floodplain.

Community. Any state, 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.

Critical facilities. Facilities that are considered critical in their need to remain serviceable during a major flood event or that their inundation by flood waters poses a high risk to the health, safety or welfare of the community.

Detention. A drainage system which delays the downstream progress of flood waters in a controlled manner, generally through the combined use of a temporary storage area and a metered outlet device which causes a lengthening of the duration of flow and thereby reduces downstream flood peaks.

Developer. Any person, group or entity proposing or constructing a development as defined by this Title.

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, and storage of materials and equipment located within the area of special flood hazard.

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 or avulsive wearing away of land masses due to the flow of water.

Erosion Hazard Setback (EHS). A prescribed horizontal distance measured from the primary channel bank of an incised channel or from the design storm's water surface limits for a non-incised channel for the purpose of providing a measure of safety against lateral erosion.

Existing Manufactured Home Park or Subdivision. A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, construction of streets and either final site grading or the pouring of concrete slabs) is completed before the effective date of the floodplain management regulations adopted by the community.

Expansion to an Existing Manufactured Home Park or Subdivision. The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads).

Five Hundred Year Flood (500-Year Flood). The flood having a 0.2% chance of being equaled or exceeded in any given year.

Flood or Flooding. A general and temporary condition of partial or complete inundation of normally dry land areas from: (1) the overflow of flood waters; (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 Boundary and Floodway Map (FBFM). The official map on which FEMA or FIA has delineated the areas of special flood hazards and the floodway.

Flood Hazard Boundary Map (FHBM). The official map on which FEMA or FIA has delineated the areas of flood hazards.

Flood Insurance Rate Map (FIRM). The official map on which FEMA or FIA 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 FIA that includes flood profiles, FIRM, FBFM and the water surface elevation of the Base Flood.

Flood Zones (FEMA defined):

- **Zone X.** Area free from a Base Flood
- **Zone X-500** Area free from a Base Flood due to a manmade protective structure or an area with Base Flood elevations or sheet flow elevations less than one foot. Area is also known as Shaded Zone X.
- **Zone A.** SFHA with no Base Flood Elevations determined.
- **Zone AE** SFHA with Base Flood Elevations determined by the Flood Insurance Study for Pima County.
- **Zone AH** SFHA with flood depths of one to three feet (usually areas of ponding); Base Flood Elevations determined by the Flood Insurance Study for Pima County.
- **Zone AO** SFHA with flood Depths of one to three feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined. The FIRMs show the depth in one foot increments and velocities in 1 foot per second increments.
- **Zone AE Floodway** That portion of a regulated watercourse's SFHA which must remain clear of any development. See also definition for Floodway.

Floodplain or Flood-Prone Area. Any land area susceptible to being inundated by water from any source. This includes FEMA Special Flood Hazard Areas, areas platted on accepted Town of Sahuarita plans as being flood prone or locally regulated areas that may be inundated by water during a Base Flood.

Floodplain Administrator. The individual appointed to administer and enforce the floodplain management regulations. Unless otherwise stated, the Town Engineer is the Floodplain Administrator.

Floodplain Board. The Town Council of The Town of Sahuarita, at such times as they are engaged in the enforcement of this Title.

Floodplain Management. The operation of an overall program of corrective and preventive measures for reducing flood damage, including but not limited to emergency preparedness plans, flood control works and floodplain management regulations.

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

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."

Floodway Fringe. That area of the floodplain on either side of the "Regulatory Floodway" where encroachment may occur.

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 or 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.

Governing Body. The Town Council of the Town of Sahuarita, which is empowered to adopt and implement regulations to provide for the public health, safety and general welfare of the citizens of the Town of Sahuarita.

Hardship. Related to Section 21.06, "*Floodplain variances*", of this Title means the exceptional hardship which would result from a failure to grant the requested floodplain variance. The governing body requires that the floodplain variance 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 floodplain 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. The highest natural elevation of the ground surface prior to construction adjacent to the proposed walls of a structure.

Historic Structure. 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 (Secretary) as meeting the requirements for individual listing on the National Register;
- B. Certified or preliminarily determined by the Secretary 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; or
- D. 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; or
 - b. directly by the Secretary in states without approved programs.

Levee. A man-made structure 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.

Locally Regulated Floodplain. Floodplains in the Town of Sahuarita associated with washes and/or sheet flow areas having a Base Flood discharge of 100 cfs or more.

Lowest Floor. The lowest floor of the lowest enclosed area, including basement (*see "Basement" definition*). 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 Title.

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 sale or rent.

Market Value. Market Value is determined by estimating the cost to replace the structure in new condition and adjusting that cost figure by the amount of depreciation that 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. For purposes of the National Flood Insurance Program, the National Geodetic Vertical Datum (NGVD) of 1929 or North American Vertical Datum (NAVD) of 1988, to which Base Flood elevations shown on a community's FIRM 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 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. A manufactured home park or subdivision for which the construction of facilities for servicing the lots on which the manufactured homes are to be affixed (including, at a minimum, the installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads) is completed on or after the effective date of floodplain management regulations adopted by the community.

Obstruction. Includes, but is 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 (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" definition)

Person. An individual or his agent, firm, partnership, association or corporation, or agent of the aforementioned groups, or this state or its agencies or political subdivisions.

Recreational Vehicle. A vehicle that 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;
- D. Designed primarily not for use as a permanent dwelling but as temporary living quarters for recreational, camping, travel or seasonal use.

Regulatory Flood Elevation. An elevation one foot above the Base Flood elevation for a watercourse for which the Base Flood elevation has been determined or as determined by the criteria developed by the Director of ADWR for all other watercourses.

Regulatory Floodplain. An area associated with a watercourse, including its channel, or any other floodplain or floodprone area that would be inundated by the Base Flood, including all Base Floods where the 100-year peak discharge is 100 cfs or greater.

Regulatory Floodway. (See “Floodway” definition)

Repetitive Loss Structure. A structure covered by a contract for flood insurance issued pursuant to the FIA that has incurred flood-related damage on two occasions during any ten year period ending on the date of the event for which a second claim is made, in which the cost of repairing the flood damage, on average, equaled or exceeded 25% of the market value of the structure at the time of each such flood event. In addition to the current claim, the NFIP must have paid the previous qualifying claim.

Retention. A drainage system which stops the downstream progress of flood waters by employing methods of containment and storage and uses infiltration, evaporation or re-use to dispose of stored waters, thereby eliminating basin contributions to the downstream flood peaks or volumes.

Sheet Flow Area. (See “Area of Shallow Flooding” definition)

Special Flood Hazard Area (SFHA). An area defined by FEMA within a community subject to a one percent or greater chance of flooding in any given year (Base Flood). These areas are designated as Zone A, AO, AH and AE on the FIRMs, and other areas determined by the criteria adopted by the Director of ADWR.

Start of Construction. Includes substantial improvement, and means the date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction of a structure on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns or any work beyond the stage of excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling, nor does it include the installation of streets and/or walkways, nor does it include excavation for 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.

Structure. A walled and roofed building, including a gas or liquid storage tank, which is principally above ground, as well as a manufactured home. “Structure” for insurance coverage purposes means a walled and roofed building, other than a gas or liquid storage tank, that is principally above ground and affixed to a permanent site, as well as a manufactured home on a permanent foundation. For the latter purpose, the term includes a building while in the course of construction, alteration or repair, but does not include building materials or supplies intended for use in such a construction, alteration or repair, unless such materials or supplies are within an enclosed building on the premises.

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% of the market value of the structure before the damage occurred. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a rolling ten-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25% of the market value of the structure before the damage occurred.

Substantial Improvement. Any reconstruction, rehabilitation, addition or other improvement of a structure, the cost of which equals or exceeds 50% 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 would not preclude the structure's continued designation as a "historic structure".

Variance, Floodplain. A grant of relief from the requirements of this Title that permits construction in a manner that would otherwise be prohibited by this Title.

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 Title is presumed to be in violation until that documentation is provided.

Water Surface Elevation. The height, in relation to the National Geodetic Vertical Datum (NGVD) of 1929 or North American Vertical Datum (NAVD) of 1988 of floods of various magnitudes and frequencies in the floodplains of riverine and ponding areas. See also Base Flood Elevation.

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 (e.g. the regulatory floodplain).

SECTION 14.03 GENERAL PROVISIONS

14.03.01 LANDS TO WHICH THIS TITLE APPLIES

This Title shall apply to the following lands within the corporate limits of the Town of Sahuarita:

- A. All special flood hazard areas as defined by FEMA
- B. FEMA zone X-500, also known as shaded zone X, as it pertains to alluvial fan or sheet flooding
- C. Local floodplains associated with washes and/or sheet flow having a Base Flood discharge of 100 cfs or more.
- D. Areas within the erosion hazard setback of a watercourse
- E. All floodplains/flood-prone areas and erosion hazard setbacks identified on previously and subsequently recorded subdivision plats
- F. All floodplains/flood-prone areas and erosion hazard setbacks identified on previously and subsequently drainage studies commissioned by the Town Engineer

14.03.02 BASIS FOR ESTABLISHING THE AREAS OF SPECIAL FLOOD HAZARD

The regulated areas of this Title as outlined in section 14.03.01 are derived from a variety of sources, whose hydrologic and hydraulic data and maps of delineation are kept on file by the Town of Sahuarita at 375 West Sahuarita Center Way, Sahuarita, AZ 85629, Sahuarita Municipal Complex, Public Works Department. This information includes or will include:

- A. The area of special flood hazard identified by FEMA in a scientific and engineering report entitled "The Flood Insurance Study (FIS) for Pima County Arizona and incorporated areas, revised February 8, 1999," with accompanying FIRMs-dated February 8, 1999 and all subsequent amendments and/or revisions, are hereby adopted by reference and declared to be a part of this Title. The FIS, FIRMs FBFM and amendments and corrections to the maps are all kept on file.
- B. The FIS and FIRMs may be supplemented by studies for other areas that allow implementation of this Title. The Floodplain Board, within the limits of the Town of Sahuarita, shall require Developers to delineate, within areas where development is ongoing or imminent, floodplains consistent with the criteria developed by FEMA, the Director of Water Resources and the Town.
- C. Due to the episodic nature of natural flood events and the resulting changes to hydrologic and hydraulic conditions along watercourses within the Town, Base Flood peak discharges, flow volumes, and associated regulatory floodplain and erosion hazard areas are subject to continuous revision. At a minimum, Base Flood values and Base Flood elevations shall meet or exceed the current values established by FEMA and reflect historic flood information and general, current watershed conditions. Current regulatory floodplain and erosion hazard area maps will be maintained by the Floodplain Administrator for the Town of Sahuarita and all watersheds which generate regulatory flood peak discharges exceeding 5,000 cfs for the Base Flood as determined.
- D. The Floodplain Administrator may accept hydrologic and hydraulic studies prepared by an Arizona Registered Professional Civil Engineer as a delineation of regulatory floodplain and erosion hazard setback areas.
- E. In all cases the most recently accepted information shall be used for floodplain management.

14.03.03 COMPLIANCE

All development of land, construction of residential, commercial or industrial structures, or future development on lands to which this Title applies is subject to the terms of this Title and other applicable regulations.

14.03.04 ABROGATION AND GREATER RESTRICTIONS

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

14.03.05 INTERPRETATION

In the interpretation and application of this Title, 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.

14.03.06 DISCLAIMER OF LIABILITY

The degree of flood protection required by this Title 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 Title 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. This Title shall not create liability on the part of the Town of Sahuarita, its officers or employees, the State of Arizona, NFIA or FEMA, for any flood damages that result from reliance on this Title or any administrative decision lawfully made under this Title.

14.03.07 STATUTORY EXEMPTIONS

- A. In accordance with A.R.S. § 48-3609(H), unless expressly provided otherwise, this and any regulation adopted pursuant to this Title 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 12 months, or destroyed to the extent of 50% of its value as determined by a competent appraiser, any further use shall comply with this article and regulations of the Town of Sahuarita
 - 2. Reasonable repair or alteration of property for the purposes for which the property was legally used on July 9, 1974, or 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% 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; and
 - 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.
 - B. Before any authorized construction begins for the exceptions listed below, the responsible person shall submit plans for the construction to the Floodplain Board for review and comment. In accordance with A.R.S. § 48-3613, written authorization shall not be required, nor shall the Floodplain Board prohibit:
 - 1. The construction of bridges, culverts, dikes and other structures necessary to 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
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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 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 this Article. 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.

14.03.08 UNLAWFUL ACTS

- 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. Any person violating the provisions of this Title shall be guilty of a class 2 misdemeanor. Each day that a violation continues shall be considered a separate offense.

14.03.09 DECLARATION OF PUBLIC NUISANCE

Every new structure, building, fill, excavation or development located or maintained within any special flood hazard area after **August 8, 1973**, in violation of this Title, and without written authorization from the Floodplain Board, is a public nuisance per se and may be abated, prevented or restrained by action of the Town of Sahuarita.

14.03.10 ABATEMENT OF VIOLATIONS

Within 30 days of discovery of a violation of this Title, 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 the 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 floodplain variance to this Title in accordance with the provisions of Section 14.06; 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 20 days. At the next regularly scheduled public meeting, the Floodplain Board shall either order the abatement of said violation or they shall grant a floodplain variance in accordance with the provisions of Section 14.06; or

- D. For FEMA regulated special flood hazard areas, submit to the administrator of FIA 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 FIA of 1968 as amended.
- E. The Town of Sahuarita may withhold the issuance of permits, including building permits, native plant permits and grading permits, for the development or improvement on the parcel or a any contiguous parcel of land under the same ownership.

14.03.11 SEVERABILITY

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

SECTION 14.04 ADMINISTRATION

14.04.01 DESIGNATION OF THE FLOODPLAIN ADMINISTRATOR

The Town Engineer or his/her designee is hereby appointed to administer, implement and enforce this Title by granting or denying floodplain use permits in accordance with its provisions. Duties of the Floodplain Administrator shall include, but not be limited to:

- A. Review all development permits to determine that:
 - 1. The permit requirements of this Title have been satisfied;
 - 2. All other required state and federal permits have been obtained;
 - 3. The site is reasonably safe from flooding;
 - 4. The proposed development does not adversely affect the carrying capacity of areas where Base Flood elevations have been determined but a floodway has not been designated. For purposes of this Title, "adversely affects" means that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will increase the water surface elevation of the Base Flood more than one tenth of a foot at any point located off of the property which is to be occupied by the anticipated development.

 - B. Use of Other Base Flood Data. When Base Flood elevation data has not been provided in accordance with Section 14.03.02, 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 14.05. Any such information shall be consistent with the requirements of FEMA and the Director of Water Resources and shall be submitted to the Floodplain Board for adoption.

 - C. Obtain and maintain for public inspection and make available the following:
 - 1. The certified regulatory flood elevation required in Section 14.05.01.C.1;
 - 2. The Zone AO certification required in Section 14.05.01.C.2;
 - 3. The floodproofing certification required in Section 14.05.01.C.5;
 - 4. The certified opening elevation required in Section 14.05.01.C.6; and

 - D. Whenever a watercourse is to be altered or relocated:
 - 1. Notify adjacent communities and ADWR prior to such alteration or relocation of a watercourse, and submit evidence of such notification to FIA through appropriate notification means; and
 - 2. Require that the flood carrying capacity of the altered or relocated portion of said watercourse be maintained.

 - E. Advise any appropriate adjacent jurisdictions having responsibility for floodplain management in writing and provide a copy of a development plan of all applications for floodplain use permits or floodplain variances to develop land in a floodplain or floodway within one mile of the corporate limits of the Town of Sahuarita. Also, advise the jurisdictions 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 within the district's area of jurisdiction. Written notice and a copy of the plan of development shall be sent to the district no later than three working days after having received a complete application by the Town of Sahuarita.

 - F. Make interpretations, where needed, as to the exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). The person contesting the location of the boundary shall be given a reasonable opportunity to appeal the interpretation as provided in Section 14.06.
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- G. Take actions on violations of this Title as required in Section 14.03.10 herein.
 - H. Notify FEMA and ADWR of acquisition by means of annexation, incorporation or otherwise, of additional areas of jurisdiction.
 - I. Within 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 Water Resources.
 - J. A community's 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, a community shall notify the FEMA Administrator of the changes by submitting technical or scientific data in accordance with this part. 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.

14.04.02 ESTABLISHMENT OF FLOODPLAIN USE PERMIT

- A. A Floodplain Use Permit shall be obtained before construction or development begins, including placement of manufactured homes, upon any land to which this Title applies as defined in section 14.03.01.
- B. Application for a Floodplain Use Permit shall be made on forms furnished by the Floodplain Administrator and include, but not be limited to:
 - a. Plans in duplicate drawn to scale showing the nature, location, dimensions and elevation of the area in question with contour lines at minimum one foot intervals
 - b. Datum used for plan and structures with conversion factor between NGVD and NAVD
 - c. Existing or proposed structures
 - d. Fill
 - e. Storage of materials
 - f. Drainage facilities
 - g. Proposed elevation in relation to specified datum 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
 - h. Proposed elevation in relation to mean sea level to which any non-residential structure will be flood-proofed
 - i. Certification by an Arizona Registered Professional Civil Engineer or architect that the floodproofing methods for any nonresidential structure meet the floodproofing criteria in Section 14.05.01.C.5
 - j. Require Base Flood elevation data for all subdivisions
 - k. Information requested by the Floodplain Administrator as found on the site plan checklist used for the purpose of floodplain management
 - l. Description of the extent to which any watercourse will be altered or relocated as a result of proposed development
 - m. Items required or permitted as part of State Standard SS6-05 (Development of Single Family Homes in Floodplain).
- C. Permit applications shall be reviewed to determine whether the proposed site alterations and improvements will be reasonably safe from flooding and lateral erosion and will not otherwise aggravate existing conditions. If a proposed development is found to be in the path of flooding, lateral erosion or would aggravate existing conditions, improvements shall be relocated or adequate protective measures shall be taken to avoid aggravating the existing conditions.
- D. Applicants for floodplain use permits shall pay a fee in accordance with the adopted Town of Sahuarita Fee Ordinance Schedule.
- E. Conditions and Restrictions shall apply to all floodplain use permits as administered by the Floodplain Administrator.

- F. No permit shall be issued for any development which is not in conformance with this Title or any other provision of law relating to such development. A floodplain use permit may be denied if the proposed development constitutes a danger or hazard to life or property. In making such a determination, the Floodplain Administrator may consider the following factors, which are not all-inclusive:
- a. The danger to life, person, or property due to increased flood heights, velocities, or redirection of flow cause by the development;
 - b. The danger that materials may be swept onto other lands or downstream to the injury of others;
 - c. The proposed water supply or sanitation systems of any development and the ability of these systems to prevent disease, contamination and unsanitary conditions if they should become flooded or eroded;
 - d. The susceptibility of the proposed development and/or its contents to flood damage and the effect of such damage on the individual owners;
 - e. The availability of alternative locations for the proposed use on the same property which are in areas not subject to flooding or erosion;
 - f. The compatibility of the proposed use with existing regulatory floodplain uses and with floodplain management programs anticipated in the foreseeable future;
 - g. The relationship of the proposed use to any comprehensive plan and floodplain management program for the area;
 - h. All-weather access to the property;
 - i. The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site under both existing and proposed conditions;
 - j. Documentation that all necessary permits have been obtained from state and federal agencies; and
 - k. Such other factors which are relevant to the purposes of this Title.

SECTION 14.05 PROVISIONS FOR FLOOD HAZARD REDUCTION

The following subsections of 14.05 contain the standards of construction for lands to which this Title applies per section 14.03.01 and are further restricted or supplemented by the requirements that follow. In all cases, impact to adjacent, upstream or downstream properties shall be taken into account.

- A. The water surface elevation may not be increased by more than one tenth of one foot at any point located off of the property which is to be occupied by the anticipated development.
- B. The velocity of the watercourse may not be increased by ten percent or by more than 1.0 foot per second, whichever is less.

14.05.01 STANDARDS OF CONSTRUCTION IN FLOODPRONE AREAS

A. Anchoring

- 1. 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;
- 2. All manufactured homes shall meet the anchoring standards of section 14.05.05.A.2.

B. Construction Materials and Methods

- 1. All new construction and substantial improvements shall be constructed with materials and utility equipment resistant to flood damage;
- 2. All new construction and substantial improvements shall be constructed using methods and practices that minimize flood damage;
- 3. All new construction, substantial improvement 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 so as to prevent water from entering or accumulating within the components during conditions of flooding;
- 4. Within FEMA Zones AH or AO, adequate drainage paths around structures on slopes are required to guide floodwaters around and away from proposed structures;
- 5. Structures designed or utilized for human habitation, whether full or part time, shall only be permitted where the product of the flow depth **d**, in feet, times the square of the flow velocity **v**, in feet per second, of the surrounding floodwaters of the Base Flood does not exceed the numerical value of 18 ($dv^2 \leq 18$) for a period greater than 30 minutes in duration as determined by an Arizona Registered Professional Civil Engineer and accepted by the Floodplain Administrator and the surrounding floodwaters of the Base Flood do not exceed three feet in depth; and
- 6. All structures designed or utilized for human habitation or commercial enterprise, whether full or part time, located within a floodplain or erosion hazard setback area shall provide protection for scour and lateral erosion based upon a scour/erosion analysis sealed by an Arizona Registered Professional Civil Engineer and accepted by the Floodplain Administrator. In all cases scour protection shall be designed to be a minimum of three feet below the lowest point of the adjacent channel or thalweg.

C. Elevation and Flood-proofing

- 1. New construction and substantial improvement of any residential structure shall have the lowest floor, including basement, elevated at or above the regulatory flood elevation.
- 2. New construction and substantial improvement of any residential structure in Zone AO shall have the lowest floor, including basement, elevated at least one foot higher than the depth number shown on the FIRM, measured from the highest existing adjacent grade.
- 3. New construction and substantial improvement of any residential structure in Zone A with no Base Flood elevations shall have the lowest floor, including basement, elevated at least four feet higher than the highest existing adjacent grade unless an engineering analysis is

- performed by an Arizona Registered Professional Civil Engineer to determine the Base Flood elevations, at which the requirement will then be a minimum of one foot above the Base Flood elevation.
4. New construction and substantial improvement of any residential structure in Zone X-500 shall have the lowest floor, including basement, elevated at least 18 inches higher than the highest existing adjacent grade.
 5. Non-residential detached structures shall either be elevated in conformance with the preceding requirements or shall, together with attendant utility and sanitary facilities:
 - a. be flood-proofed so that below the regulatory flood level the structure is watertight with walls substantially Impermeable to the passage of water;
 - b. have structural components capable of resisting hydrostatic and hydrodynamic loads and effects of buoyancy.
 - c. areas of the structure below the regulatory flood elevation must be constructed with flood resistant material; and
 - d. be certified by an Arizona Registered Professional Civil Engineer or architect that the standards of this subsection are satisfied. Such certifications shall be provided to the Floodplain Administrator.
 6. All new construction and substantial improvements with 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 an Arizona Registered Professional Civil Engineer or architect to meet or exceed the following minimum criteria:
 - a. a minimum of two openings on different sides of each enclosed area that have a total net area of not less than one square inch for every square foot of enclosed area subject to flooding shall be provided;
 - b. the bottom of all openings shall be no higher than one foot above finished grade; and
 - c. openings may be equipped with screens, louvers, valves or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.
 - d. portions of new construction located below the regulatory flood elevation must be built using flood-resistant materials.
 - e. any mechanical and utility equipment in the structure must be elevated or floodproofed to or above the regulatory flood elevation.
 7. Manufactured homes shall meet the above applicable standards and also the standards in Section 14.05.05.
 8. If fill is used to elevate any structure, the fill shall extend at such elevation for a distance of at least fifteen feet beyond the outside limit of the structure unless a study/analysis prepared by an Arizona Registered Professional Civil Engineer demonstrates that a lesser distance is acceptable.
 9. Upon the completion of the structure and prior to the issuance of a certificate of occupancy the elevation of the lowest floor including basement shall be certified by an Arizona Registered Professional Civil Engineer or surveyor and provided to the Floodplain Administrator.

14.05.02 STANDARDS FOR STORAGE OF MATERIALS AND EQUIPMENT

- A. The storage or processing of materials that are, in time of flooding, buoyant, flammable, explosive or could be injurious to human, animal or plant life is prohibited.
- 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.
- C. Storage of materials and equipment is further restricted in the Floodway per section 14.05.09.

14.05.03 STANDARDS FOR UTILITIES

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- 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 not be located in a floodplain or erosion hazard setback area if a more suitable area exists on the parcel.
 - C. Waste disposal systems shall not be installed wholly or partially in a regulatory floodway. Crossings are allowed if buried at least one foot below the calculated scour depth as determined in a study/analysis prepared by an Arizona Registered Professional Civil Engineer.
 - D. Utilities shall be buried at least one foot below the calculated scour depth as determined in a study/analysis prepared by an Arizona Registered Professional Civil Engineer.

14.05.04 STANDARDS FOR SUBDIVISIONS AND COMMERCIAL DEVELOPMENTS

- A. All preliminary subdivision plats and development plans shall delineate the FEMA SFHA, Floodway if applicable, locally regulated floodplain, erosion hazard setback areas, and Base Flood elevations. The pre- and post- development conditions shall be shown.
- B. All final subdivision plats shall provide the elevation of each proposed structure and pad affected by or adjacent to flood hazards. If the site is filled above the Base Flood, the final lowest floor and pad elevation shall be certified by an Arizona Registered Professional Civil Engineer or surveyor and provided to the Floodplain Administrator. All final subdivision plats shall delineate the FEMA SFHA, Floodway if applicable, locally regulated floodplain and erosion hazard setbacks in a surveyable manner and sealed by an Arizona Registered Land Surveyor.
- C. All improvement plans relating to grading, paving, sewer or drainage shall delineate the FEMA SFHA, locally regulated floodplain, erosion hazard setback areas and Base Flood elevations. The pre and post development conditions are to be shown.
- D. All subdivision and commercial development proposals shall be consistent with the need to minimize flood damage.
- E. All subdivision and commercial development proposals shall have public utilities and facilities such as sewer, gas, electrical and water systems located and constructed to minimize flood damage.
- F. All subdivisions and commercial developments shall provide adequate drainage to reduce exposure to flood hazards.
- G. All subdivisions with a minimum lot size of 16,000 square feet or less shall be platted such that FEMA SFHA, locally regulated floodplains, and erosion hazard setback areas are not located on individual lots. Such areas shall be contained within common areas.
- H. All subdivisions with a minimum lot size greater than 16,000 square feet shall show buildable pad areas for each lot in which a FEMA SFHA, locally regulated floodplain or erosion hazard setback appears on individual lots. Pad elevations, encroachments, and/or erosion hazard setback protective measures shall be designed by an Arizona Registered Professional Civil Engineer as part of the project.
- I. When a modification or removal of a FEMA SFHA is sought for a development, the following requirements apply:
 - 1. A hydraulic analysis and engineering plans for the modifications must be accepted by the Floodplain Administrator. New delineations of the floodplain conditions shall be prepared in conformance with the requirements of FEMA for LOMRs, the state Director of Water Resources, and the Town.
 - 2. A CLOMR must be submitted to and accepted by FEMA prior to the recording of a final plat for subdivisions.
 - 3. A CLOMR must be submitted to and accepted by FEMA prior to construction of physical improvements.
 - 4. Subdivision lots to be affected by a LOMR will not be partially released from assurance agreements or have certificate of occupancies granted until the LOMR has become effective.
 - 5. Commercial/Industrial buildings to be affected by a LOMR will not be granted a certificate of occupancy, including temporary certificate of occupancy, until the LOMR has become

effective unless the building as constructed meets the requirements of this Title for the pre-LOMR conditions.

- J. All subdivisions and commercial/industrial developments shall provide all weather access in accordance with section 14.05.12.

14.05.05 STANDARDS FOR MANUFACTURED HOMES AND MANUFACTURED HOME PARKS OR SUBDIVISIONS

Manufactured homes and manufactured home parks or subdivisions must meet other applicable requirements of section 14.05 that have not been supplemented or revised by this subsection.

- A. All manufactured homes and substantially improved manufactured homes located within lands to which this Title applies per section 14.03.01 shall be required to comply with the following:
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; and
 2. Be securely anchored to resist flotation, collapse or lateral movement by one of the following methods:
 - a. Provision of an anchoring system designed to withstand horizontal forces of 25 pounds per square foot and uplift forces of 15 pounds per square foot; or
 - b. Provision of over-the-top and frame ties to ground anchors, specifically:
 1. Over-the-top ties shall be provided at each of the four corners of the manufactured home, with two additional ties per side at intermediate locations, except that manufactured homes less than 50 feet long require only one additional tie per side; and
 2. Frame ties shall be provided at each corner of the home with five additional ties per side at intermediate points, except that manufactured homes less than 50 feet long require only four additional ties per side; and
 3. All components of the anchoring system shall be capable of carrying a force of 4,800 pounds.
- B. All manufactured home parks or subdivisions located within lands to which this Title applies per section 14.03.01 shall be required to comply with the following:
1. All manufactured homes shall be placed on pads or lots elevated on compacted fill so that the bottom of the structural frame and any attached electrical appliances is at or above the regulatory flood elevation; or
 2. Shall be placed on stem walls or pilings so that the bottom of the structural frame and any attached electrical appliances is at or above the regulatory flood elevation.
 - a. Lots shall be large enough to permit steps.
 - b. Pilings or stem wall shall be placed in stable soil.
 - c. Pilings shall be no more than ten feet apart.
- C. Certification that the installation of a manufactured home meets all of the requirements of this section is required. Such certification shall be provided by the person installing the manufactured home, the owner, the developer of a manufactured home park or subdivision, or an agency regulating manufactured home placement, whichever is deemed appropriate by the Floodplain Administrator. Certification of Finished Floor Elevation shall be in accordance with section 14.05.01.C.9.

14.05.06 STANDARDS FOR RECREATIONAL VEHICLES

All recreational vehicles placed on site shall either:

- A. Be on site for fewer than 180 consecutive days, and 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

- B. Meet the permit requirements of Section 14.04.02 of this Title and the elevation and anchoring requirements for manufactured homes in Section 14.05.05.

14.05.07 STANDARDS FOR CRITICAL FACILITIES

Critical facilities shall be regulated to withstand the 500-year event. Critical facilities shall be required to meet the following requirements:

- A. Structures or facilities that produce, use or store more than 100,000 gallons of highly volatile, flammable, explosive, toxic and/or water-reactive materials shall be located outside of the 500-year FEMA floodplain (shaded Zone X) and locally regulated floodplain calculated at the 500 year interval.
- B. Public and private utility facilities that are vital to maintaining or restoring normal services to flooded areas before, during and after a flood shall be located outside of the FEMA Special Flood Hazard Area and the locally regulated floodplain. Such facilities shall be designed to avoid the 500-year floodplain or certify the safety of the development per subsection 14.05.07D.
- C. Police stations, fire stations, hospitals, nursing homes, assisted living homes, public vehicle and equipment storage facilities, emergency operations centers and schools designated to be used as temporary shelters shall be located outside the FEMA Special Flood Hazard Area and the locally regulated floodplain. Such facilities shall be designed to avoid the 500-year floodplain or certify the safety of the development per subsection 14.05.07D.
- D. The developers of critical facilities referenced in subsections B and C above shall certify the safety of the development by providing the following information to the satisfaction of the Floodplain Administrator:
 - a. Freeboard requirements shall be such that the finished floor elevation shall be elevated one foot above the 500-year water surface elevation.
 - b. Developer shall delineate any 500-year floodplains and the respective erosion hazard setback areas within 200 feet of the parcel or development.
 - c. The 500-year water surface elevations shall be delineated by the developer on the preliminary/final plats, development plans and improvement plans.
 - d. Toe downs and bank protection shall be designed to withstand the 500-year flood.

14.05.08 STANDARDS FOR EXCAVATIONS, INCLUDING SAND AND GRAVEL OPERATIONS

Excavations, including sand and gravel operations may be permitted provided the following minimum conditions are met in addition to any other requirements per the Town Code. Additional conditions apply for operations occurring within a regulatory floodway as required in section 14.05.09.

- A. Extraction of sand, gravel and other materials is allowed provided that excavations are not so located or of such depth, or width, or length or combination of depth-width-length as to present a hazard to structures (including but not limited to roads, bridges, culverts, and utilities), to the banks of watercourses, to other property, or which adversely affects groundwater recharge.
- B. No stockpiling is permitted within special flood hazard areas of materials or tailings that may obstruct, divert, or retard the flow of floodwaters except as reviewed and accepted by the Floodplain Administrator on an individual floodplain use permit basis.
- C. Due to the rapidly changing hydraulic characteristics of watercourses in the Town of Sahuarita, and the effects excavations have on these characteristics, floodplain use permits for excavations shall only be issued for a limited time period not to exceed one year, subject to annual renewal and review by the Floodplain Administrator. Renewals will only be granted after receipt and acceptance of a report by the operator showing that the sand and gravel excavations remain in compliance with the conditions of the previous floodplain use permit, current floodplain conditions and all current related floodplain management regulations.
- D. In addition to those conditions provided for elsewhere, floodplain use permits for excavations may impose site specific conditions based upon hydraulics and sediment transport regarding the area

and location in which excavations are allowed, the maximum amount of material to be excavated, and other reasonable restraints on the methods of operating in relationship to the floodplain conditions.

- E. The Floodplain Administrator may require hydrologic, hydraulic and geomorphic analyses addressing the existing conditions as well as the impacts under the proposed method of operation.

14.05.09 FLOODWAY REQUIREMENTS

Located within special flood hazard areas established in Section 14.03.02 are areas designated as floodways. The floodway is an extremely hazardous area due to the velocity of floodwaters which carry debris, potential projectiles and erosion potential. Encroachments are prohibited in the floodway, including fill, new construction, substantial improvements and other development. The following subsections clarify how the floodway may be developed:

- A. The following open space uses are permitted within the floodway to the extent that they are not prohibited by any provision of this Title or any other ordinance, law or regulation, and provided they do not require fill, excavation, or the storage of materials or equipment:
 - a. Agricultural uses, including general farming, pasture, grazing, outdoor plant nurseries, horticulture, viticulture, truck farming, sod farming, and wild crop harvesting.
 - b. Industrial-commercial uses such as loading areas, airport landing strips, and parking areas.
 - c. Private and public recreational uses, including golf courses, tennis courts, driving ranges, archery ranges, picnic grounds, boat launch ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting preserves, target ranges, trap and skeet ranges, hunting and fishing areas, hiking and horseback riding trails.
 - d. Accessory residential uses, including lawn gardens, parking areas and play areas.
- B. Excavations, including sand and gravel operations may occur in the floodway under the following conditions in addition to those required in section 14.05.08:
 - a. There shall be no stockpiling of materials or tailings within the floodway.
 - b. Excavations may be allowed only in those reaches of watercourses which have, at a minimum, a balanced sediment system; that is, the sediment coming into the reach is equal to or greater than the sediment leaving the reach and the long term sediment balance for the entire river system indicates that the stream channel will aggrade.
- C. Flood control structures designed to protect life or property from the dangers or hazards of floodwaters are permitted provided all other provisions of this Title are met.
- D. No use shall be allowed which:
 - a. Acting alone or in combination with existing or future uses creates danger or hazard to life or property. In determining whether a use creates a danger or hazard to property, the Floodplain Administrator may require a certification by an Arizona Registered Professional Civil Engineer that the proposed use will not result in any increase in the floodway elevations during the occurrence of the Base Flood nor will the proposed use divert, retard or obstruct the flow of flood waters.
 - b. Increases the regulatory floodway elevation.
 - c. Adversely effects groundwater recharge.
 - d. Increases erosion potential upstream and/or downstream.
 - e. Places a waste disposal system wholly or partially in a floodway.

14.05.10 EROSION HAZARD SETBACK REQUIREMENTS

Close proximity to watercourses poses a hazard to development due to lateral erosion. Per section 14.03.01, the erosion hazard setback area of a watercourse is a land covered by this Title.

- A. Along natural watercourses where unusual geology, sinuosity or similar physical conditions exist, the erosion hazard setback shall be established on a case-by-case basis by the Floodplain

Administrator, unless an engineering study is done to establish the limits by an Arizona Registered Professional Civil Engineer and accepted by the Floodplain Administrator.

- B. Along incised natural watercourses where no unusual geology, sinuosity or similar conditions exist, a standard setback measured from the top of the primary channel bank shall be provided at the time of development. The setback may be reduced by an engineering analysis performed by an Arizona Registered Professional Civil Engineer and accepted by the Floodplain Administrator in accordance with subsection 14.05.10.D.
- C. Along non-incised natural watercourses (i.e. sheet flow areas) where no unusual geology, sinuosity or similar conditions exist, a standard setback measured from the Base Flood limits shall be provided at the time of development. The setback may be reduced by an engineering analysis performed by an Arizona Registered Professional Civil Engineer and accepted by the Floodplain Administrator in accordance with subsection 14.05.10.D.
- D. Standard erosion hazard setbacks may be reduced by an engineering study performed by an Arizona Registered Professional Civil Engineer and accepted by the Floodplain Administrator. The reduced setbacks shall not fall below minimum allowable erosion hazard setbacks unless the study also includes an analysis performed by an Arizona Registered Professional Geological Engineer. The following table shows the standard and minimum allowable setbacks when no physical construction is made to prevent erosion hazard:

| Base Flood flow rate (cfs) | Standard Erosion Hazard Setback (feet) | Minimum allowable Erosion Hazard Setback (feet) |
|----------------------------|--|---|
| <500 | 25 | 15 |
| 500-1999 | 50 | 25 |
| 2000-4999 | 75 | 45 |
| 5000-9999 | 100 | 70 |
| 10,000 and greater | 250 | 175 |
| Santa Cruz River | 500 | 350 |

14.05.11 DETENTION AND RETENTION REQUIREMENTS

- A. Any development with a residential density of three or more units per acre, or any residential development larger than one acre that has a density of six units per developed acre, as well as all proposed commercial and industrial developments shall provide some method of peak and/or volumetric runoff reduction. The amount of reduction is stipulated in the 1991 edition of the Pima County Storm Water Detention/Retention manual. The peak runoff reduction shall be provided through detention of storm water and storm water harvesting for irrigation where possible.
- B. Balanced and critical drainage basins are watersheds that have been identified by the Chief Engineer of the Pima County Flood Control District on a 1987 map as unsuitable for increased development because of the high probability of increased flooding with development and the potential for flooding of existing improvements or property. The Floodplain Administrator shall maintain this map of critical and balanced basins within the jurisdictional limits of the Town of Sahuarita. Drainage basins that have not previously been identified as unsuitable for additional urban development shall be considered balanced basins, but upon study by the Floodplain Administrator, may be classified as critical basins. Critical and balanced basins may be developed further only upon the incorporation of adequate detention systems or flood control facilities, as reviewed and accepted by the Floodplain Administrator. These detention systems or flood control facilities shall be incorporated into any and all future basin-development proposals, regardless of size or land-use density.
- C. Structural flood control measures may be proposed in conjunction with, or in place of detention/retention systems if it can be clearly demonstrated that such measures will not alter the water and sediment equilibrium of the affected watercourse, and will mitigate

environmental impacts. Structural flood control measures, such as channelization to a logical conclusion downstream of the proposed development and/or improvements to existing offsite flood control systems within the applicable drainage or stream reach, shall be completed in accordance with plans reviewed and accepted by the Floodplain Administrator.

- D. Localized areas lacking sufficient improved or natural receiving waters into which runoff may be discharged may be required to follow alternative drainage solutions including complete retention practices as directed by the Town Engineer.
- E. A fee may be collected by the Town in lieu of detention/retention system when it can be clearly demonstrated that the detention at the site does not provide offsite flood relief due to the parcel size, location within the drainage basin, or other factors. The fees collected will be used to construct public flood control improvements that will mitigate the potential damage of flood waters originating from the property contributing the fees. In balanced and critical drainage basins, and where development is less than three units per acre, use of a fee system will be encouraged in lieu of a detention system to preserve the natural drainage patterns. The fee shall be equivalent to the cost of a detention system that would otherwise be constructed for the development to mitigate increased storm water runoff created by the proposed development.

14.05.12 ACCESS REQUIREMENTS

- A. Developments shall provide all-weather access in accordance with the following requirements:
 - 1. Developments that fall under the requirements of subdivisions of ten or fewer lots of the Land Development Code shall provide all-weather access from each lot to the subdivision entrance. All-weather access shall be constructed from the subdivision entrance to the nearest paved public roadway. This requirement may be waived if the following criteria is met:
 - a. Subdivision is characterized as a residential subdivision
 - b. Subdivision is of a rural character, with minimum lot sizes of 36,000 square feet
 - c. If, in the determination of the Floodplain Administrator, it is not reasonably feasible to construct such access to the subdivision entrance
 - d. Section 14.05.12.B provisions are be utilized.
 - 2. All subdivisions that do not fall under the preceding requirements shall provide all-weather access from each lot to a paved public right of way. A subdivision with more than one access to a paved public roadway need only have one all-weather access.
 - 3. All commercial developments shall provide all-weather access from a paved public roadway to all public portions of their site. Nonpublic portions of a commercial development that are not all-weather access shall be gated and signs posted in accordance with section 14.05.12.B.
 - 4. Private residential construction not part of a recorded subdivision shall construct an all-weather access from the property boundary to a paved public roadway. If in the determination of the Floodplain Administrator it is not reasonably feasible to construct such access to the property, then section 14.05.12.B provisions may be utilized.
- B. The Floodplain Administrator may allow certain exemptions to all-weather access as stated in the preceding section. A condition of allowing this exemption is that the owner shall execute and record a covenant running with the land enforceable by the Town of Sahuarita which contains the following:
 - 1. An acknowledgement that the vehicular access may be impassable to conventional motor vehicles and emergency vehicles in times of flooding,
 - 2. A hold harmless provision, holding the Town of Sahuarita, its agents, the Floodplain Management Board harmless from and against all injuries and damages resulting from the traversing or attempting to traverse the vehicle access during times of flooding, and
 - 3. The covenant, successors and assigns shall erect and maintain a sign(s) in a location(s) and size(s) acceptable to the Town of Sahuarita stating "DO NOT ENTER WHEN FLOODED"

SECTION 14.06 FLOODPLAIN VARIANCE PROCEDURE

14.06.01 NATURE OF FLOODPLAIN VARIANCES

Floodplain variances pertain to a piece of property and are not personal in nature. A floodplain variance may be granted for a parcel of property with physical characteristics so unusual that complying with the requirements of this Title 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 characteristic must pertain to the land itself, not to the structure, its inhabitants or the property owners.

Floodplain variances from the flood elevation or from other requirements in this Title shall be granted only in rare situations. The long-term goal of preventing and reducing flood loss and damage can only be met if floodplain variances are strictly limited. Therefore, the floodplain variance guidelines provided in this Title are more detailed and contain multiple provisions that must be met before a floodplain variance can be properly granted. The criteria are designed to screen out those situations in which alternatives other than a floodplain variance are more appropriate.

14.06.02 APPEAL BOARD

- A. The Floodplain Board of The Town of Sahuarita shall hear and decide appeals and requests for floodplain variances from the requirements of this Title.
- B. 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 Title.
- C. In considering applications, the Floodplain Board shall consider all technical evaluations, all relevant factors, standards specified in other sections of this Title, 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 and all of its habitable structures 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.
- D. Upon consideration of the factors of Section 14.06.02.C and the purposes of this Title, the Floodplain Board may attach such conditions to the granting of floodplain variances as it deems necessary to further the purposes of this Title.
- E. Any applicant to whom a floodplain variance is granted shall be given written notice over the signature of a community official that:
 - 1. The issuance of a floodplain variance to construct a structure below the Base Flood level will result in increased premium rates for flood insurance coverage;

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2. Such construction below the Base Flood level increases risks to life and property; and
 3. The land upon which the floodplain variance is granted shall be ineligible for exchange of state land pursuant to the flood relocation and land exchange program provided for by A.R.S. Title 26, Chapter 2, Article 2. A copy of the notice shall be recorded in the office of the Pima County Recorder and shall be recorded in a manner so that it appears in the chain of title of the affected parcel of land.
- F. The Floodplain Administrator shall maintain a record of all floodplain variance actions, including justification for their issuance and report such floodplain variances issued in its biennial report submitted to the FEMA.

14.06.01.1 CONDITIONS FOR FLOODPLAIN VARIANCES

- A. Floodplain variances may be issued for the repair, rehabilitation, restoration, or floodproofing 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 floodplain variance is the minimum necessary to preserve the historic character and design of the structure.
- B. Floodplain variances may be issued for accessory structures used solely for limited storage that have a size of less than 150 square feet, provided that the following requirements are met:
1. Structure is anchored to resist flotation, collapse and lateral movement;
 2. The portions of the structure located below the BFE are constructed of flood resistant materials;
 3. The structure is designed to allow for the automatic entry and exit of flood waters;
 4. Any mechanical, utility or electrical equipment is elevated or floodproofed above the BFE; and
 5. The structure does not violate any floodway requirements.
- C. Floodplain variances may be issued for agricultural structures whose use is exclusively in connection with the production, harvesting, storage, drying, or raising of agricultural commodities, including the raising of livestock, such as pole and pre-fabricated metal structures, grain bins and corn cribs provided that the following requirements are met:
1. The structure is designed in a manner that results in minimal damage from flooding;
 2. The contents stored in the structure will create no additional threat to the public;
 3. The structure is designed to allow for the automatic entry and exit of flood waters;
 4. Any mechanical, utility or electrical equipment is elevated or floodproofed above the BFE; and
 5. The structure does not violate any floodway requirements.
- D. Floodplain variances shall not be issued within any designated floodway if any increase in flood levels during the Base Flood discharge would result.
- E. Floodplain variances shall only be issued upon a determination that the floodplain variance is the minimum necessary, considering the flood hazard, to afford relief.
- F. Floodplain variances shall only be issued upon:
1. A showing of good and sufficient cause;
 2. A determination that failure to grant the floodplain variance would result in exceptional hardship to the applicant;
 3. 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 14.02.02 of this Title in the definition of "Functionally Dependent Use"; and,
 4. A determination that the granting of a floodplain 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.
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